Installation and User Guide for

ViScope Recording and Playback Software

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HD Medical Services (India) Pvt Ltd
No.11, East Coast Road, Kanathur,
Chennai -603112, India.

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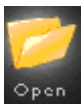
7.8 "Open" Button 

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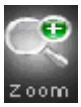
7.14 "Zoom" Button 

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This user guide is common for ViScope enabled with PC compatibility

Installation and User Guide for ViScope Recording and Playback Software V 5.0

1 Intended Use

This user guide is a reference for Real time data transfer from ViScope to PC hereinafter referred to as "ViScope Recording and Playback Software". It provides information on the features and functions.

Before going through ViScope Recording and Playback Software, user should become thoroughly familiar with ViScope device operation.

Read the information in this user guide before using "ViScope Recording and Playback Software"

2 Conventions used in this User Guide

- **When steps in operating ViScope Recording and Playback Software are numbered, it implies that it should be followed in sequence.**
- **Bulleted lists represent information, but do not imply a sequence.**
- **Vx.x represents respective versions of software provided in general.**

3 User Assistance

For Technical information and assistance-Contact service@hdmedicalgroup.com

4 Introduction to ViScope Recording and Playback Software

ViScope Recording and Playback Software V5.0 for Windows based operating system allows the user to acquire and save heart sounds using ViScope device for analyzing and generating patient reports. It is also used for transferring the waveforms stored in device to PC for analyzing and generating patient reports.

5 Features

- **Ability to acquire/retrieve heart sounds displayed by ViScope device and save them along with the patient's information on the computer.**
- **Displays waveforms for quick and correct identification of murmurs and gallops.**
- **Visualization tools include zoom and calipers.**
- **Facilitates generation of printable patient specific reports.**
- **Can be used to transfer the waveforms stored in device to PC for analyzing and generating patient reports.**

NOTE: Tutor waveforms and other files saved using ViScope Recording and Playback Software V5.0 can ONLY be opened with ViScope Recording and Playback Software V5.0

6 System Requirements

Recommended operating system -Windows Xp / Windows Vista /Windows 7
RAM Requirements - Minimum 1 GB
Hard disk Space - 10 GB

NOTE: ViScope Recording and Playback Software V5.0 is best suited for PC monitor resolution of 1024 X 768 Pixels

7 Installation of ViScope Recording and Playback Software V5.0:

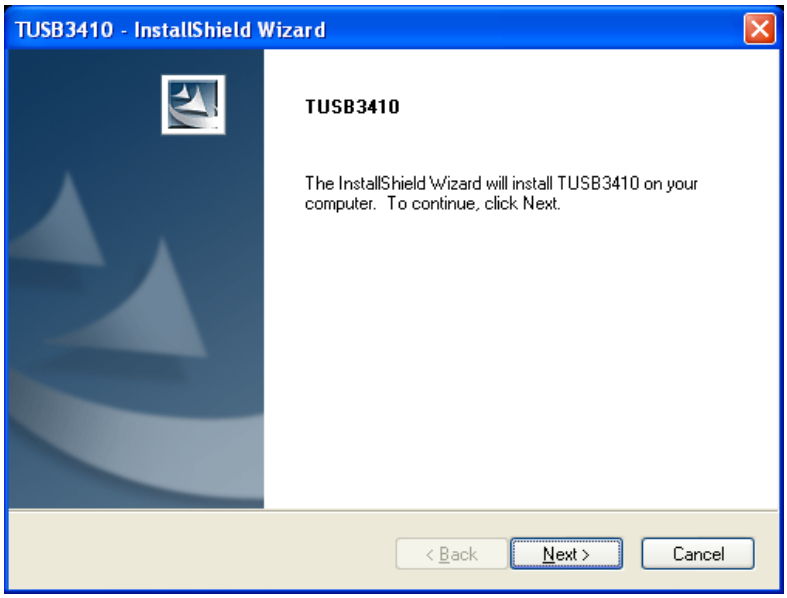
7.1 ViScope Recording and Playback Software V5.0 Driver installation

- **For Vista :**

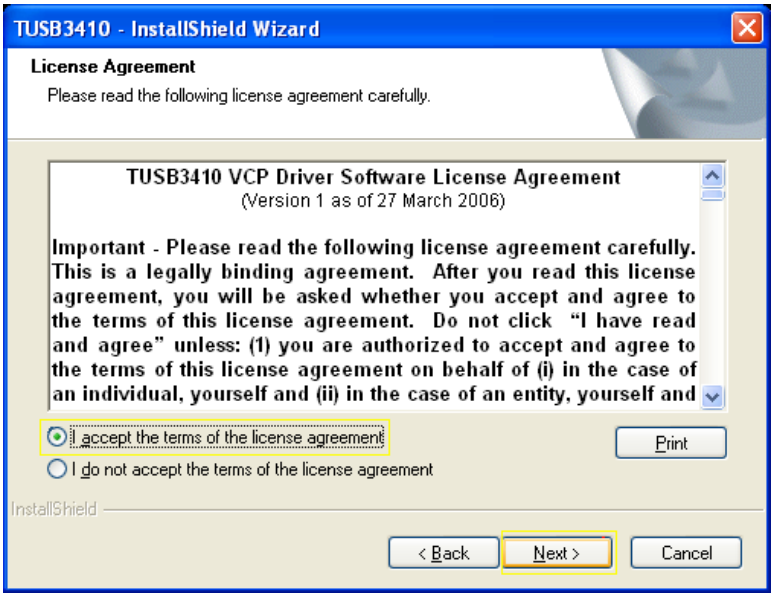
1. **Open the "Data acquisition Software" folder from the CD provided and open "USB Driver - Vista" folder in it.**

2. **Double click on "setup.exe" to initiate installation**
   Data acquisition Software → USB Driver → Vista → setup.exe

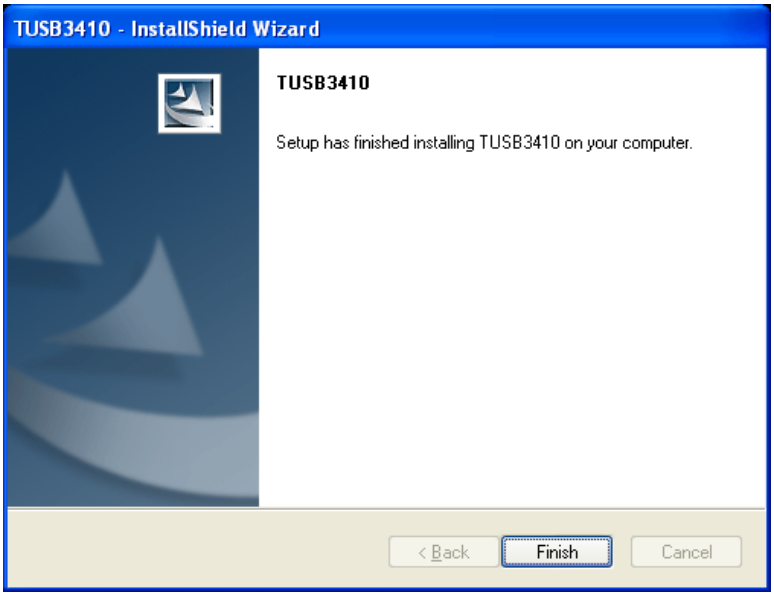
   This brings the initial driver set-up screen as follows


TUSB3410 - InstallShield Wizard
TUSB3410
The InstallShield Wizard will install TUSB3410 on your computer. To continue, click Next.
< Back
Next >
Cancel

3. **Select "I accept" and click next.**


TUSB3410 - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
TUSB3410 VCP Driver Software License Agreement
(Version 1 as of 27 March 2006)
Important - Please read the following license agreement carefully. This is a legally binding agreement. After you read this license agreement, you will be asked whether you accept and agree to the terms of this license agreement. Do not click "I have read and agree" unless: (1) you are authorized to accept and agree to the terms of this license agreement on behalf of (i) in the case of an individual, yourself and (ii) in the case of an entity, yourself and
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

4. **Select "Finish"**



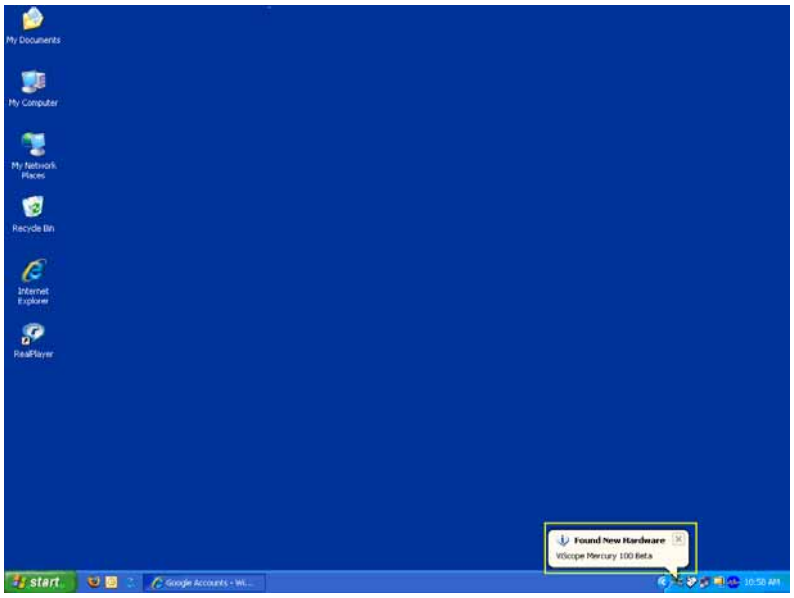
- **For Win XP**

  The user can start with Setup procedure as mentioned below

7.2 Installing the USB cable Drivers

Connect the ViScope Device and your PC with the USB – Cable provided along with ViScope Kit.

1. **"New hardware found" message would pop up at the bottom right corner of the Monitor as below.**



2. **Select the second option "Yes, now and every time I connect a device" & select "Next"**

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

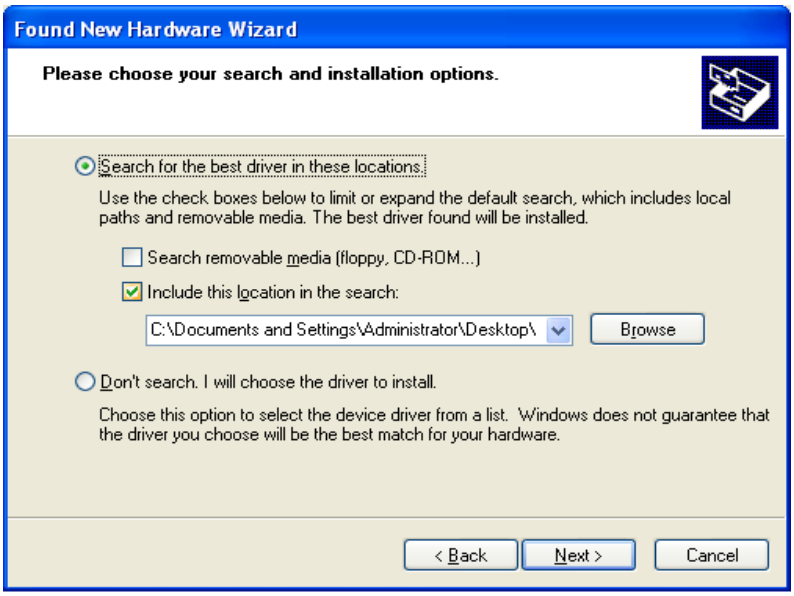
3. **Select the second option "Install from list or specific location (Advanced)" in the resulting screen.**

4. **Click "Next" and proceed.**

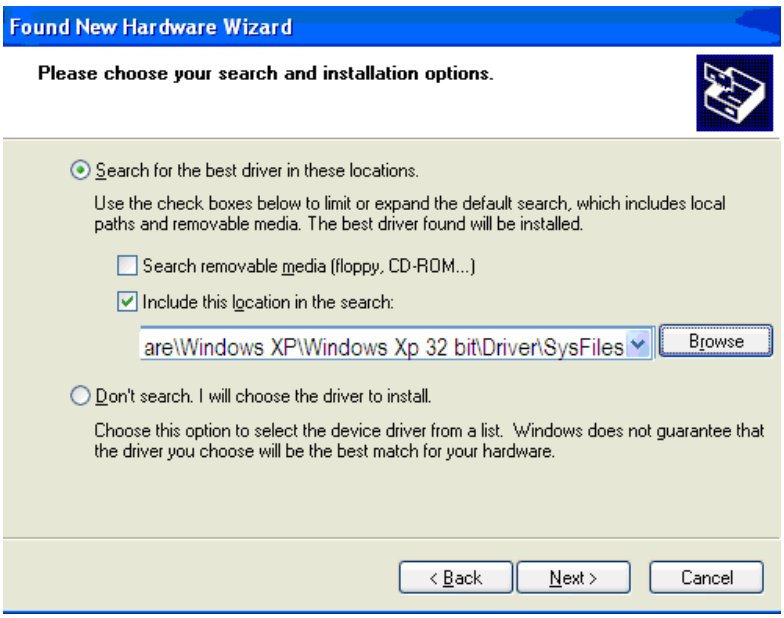
Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
ViScope Mercury 100 Beta
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

This will lead the user to specify the folder in which the driver installation files are located.

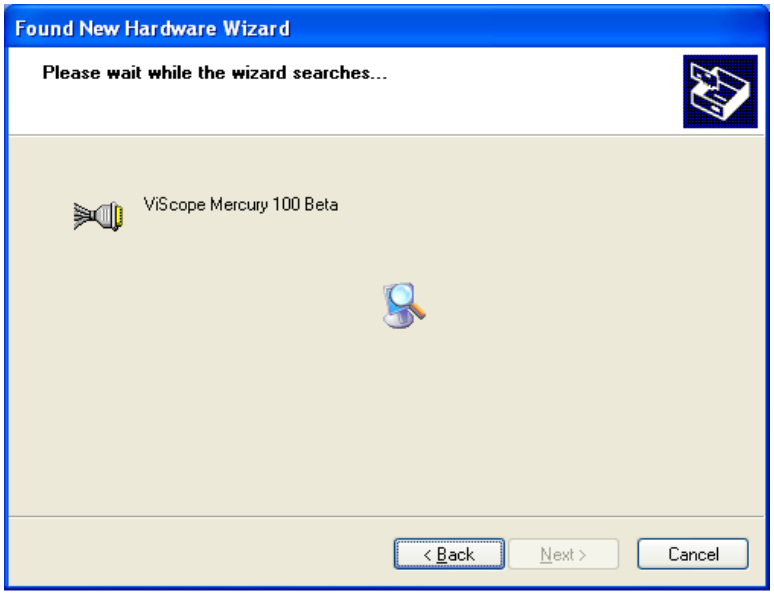
5. **Click "Browse" and select the location "Data acquisition Software**Windows Xp\Windows Xp 32bit\Driver\Sysfiles" **from the original CD contents**


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
C:\Documents and Settings\Administrator\Desktop\
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

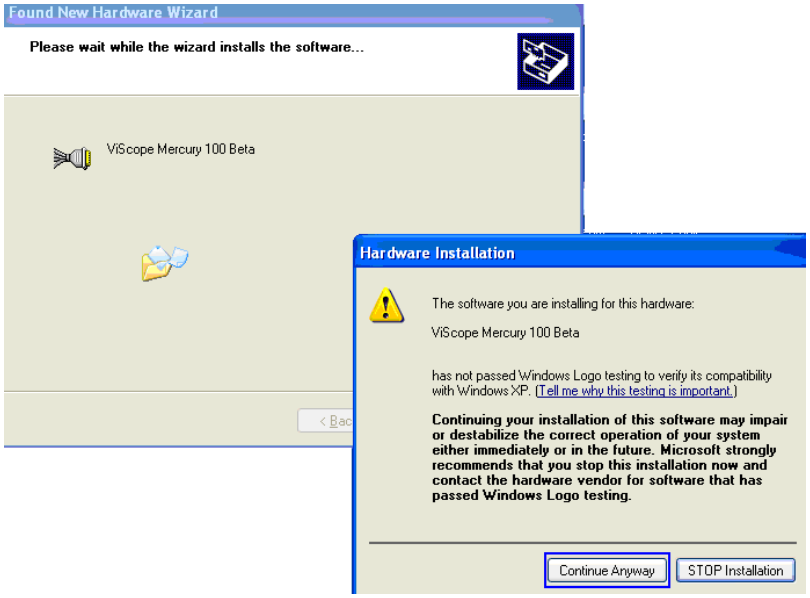
6. **Select "Next"**


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
are\Windows XP\Windows Xp 32 bit\Driver\SysFiles
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

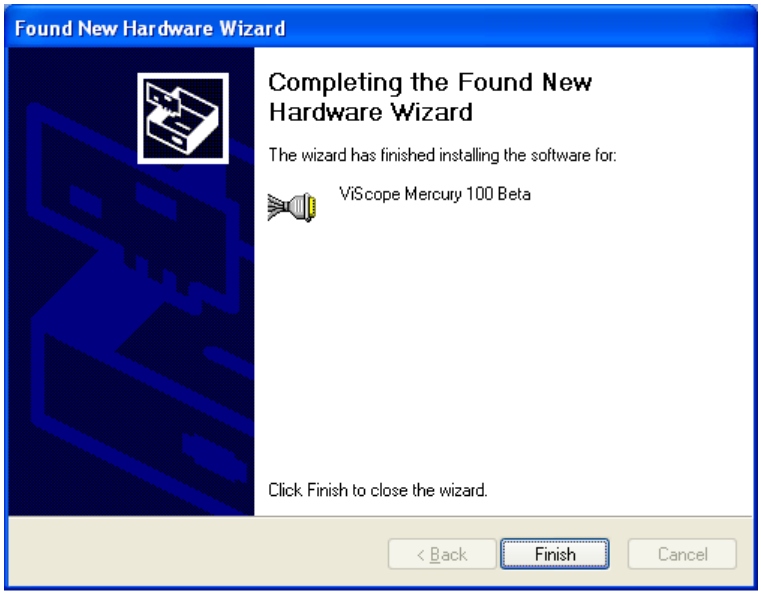
7. **The system completes the search and locates the file, Select "Next"**



8. **In case the following screen appears click "Continue Anyway"**


Found New Hardware Wizard
Please wait while the wizard installs the software...
ViScope Mercury 100 Beta
Hardware Installation
The software you are installing for this hardware:
ViScope Mercury 100 Beta
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

9. **Once the installation is completed, select “Finish”**

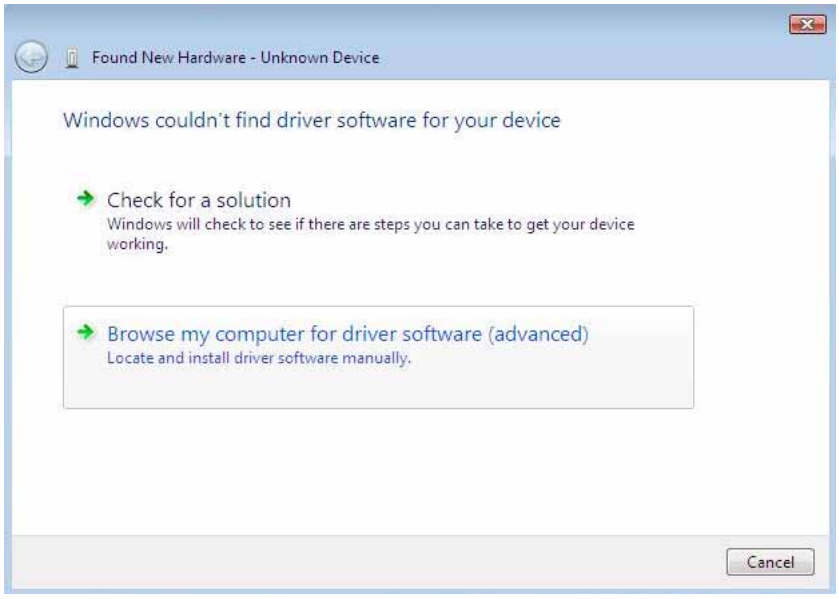

Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
ViScope Mercury 100 Beta
Click Finish to close the wizard.
< Back
Finish
Cancel

- **For Vista :**

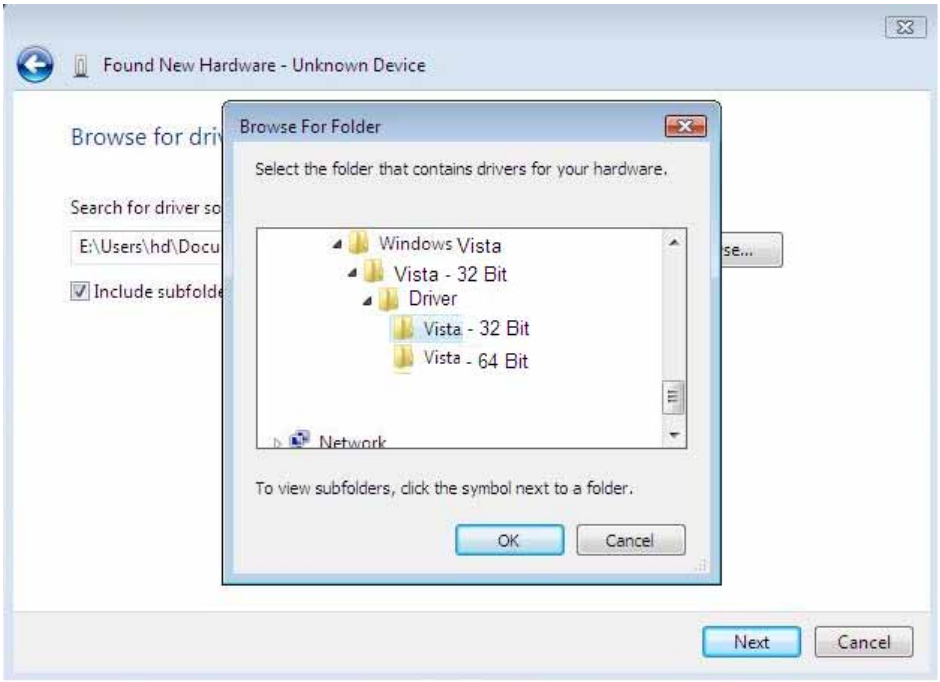
1. **Select “locate and install driver software(recommended)”**

Found New Hardware
Windows needs to install driver software for your Unknown Device
Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.
Ask me again later
Windows will ask again the next time you plug in your device or log on.
Don't show this message again for this device
Your device will not function until you install driver software.
Cancel

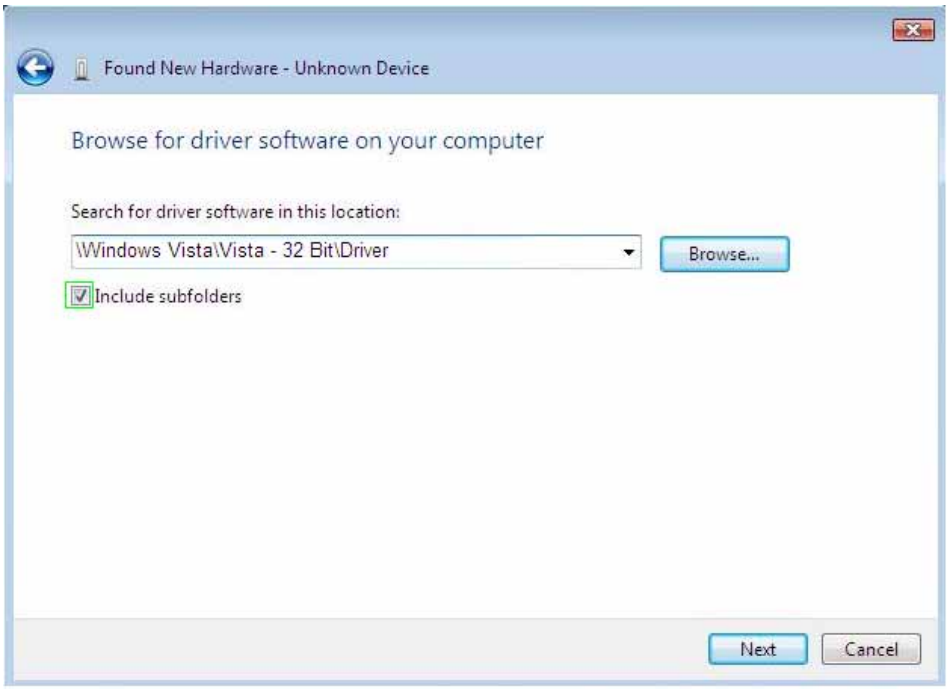
2. **Select "Browse my computer for driver software(advanced)"**


Found New Hardware - Unknown Device
Windows couldn't find driver software for your device
Check for a solution
Windows will check to see if there are steps you can take to get your device working.
Browse my computer for driver software (advanced)
Locate and install driver software manually.
Cancel

3. **Browse to path "Data acquisition Software\USB Driver\ Vista\ windows\ tiinst\ TUSB3410\ Vista32"**



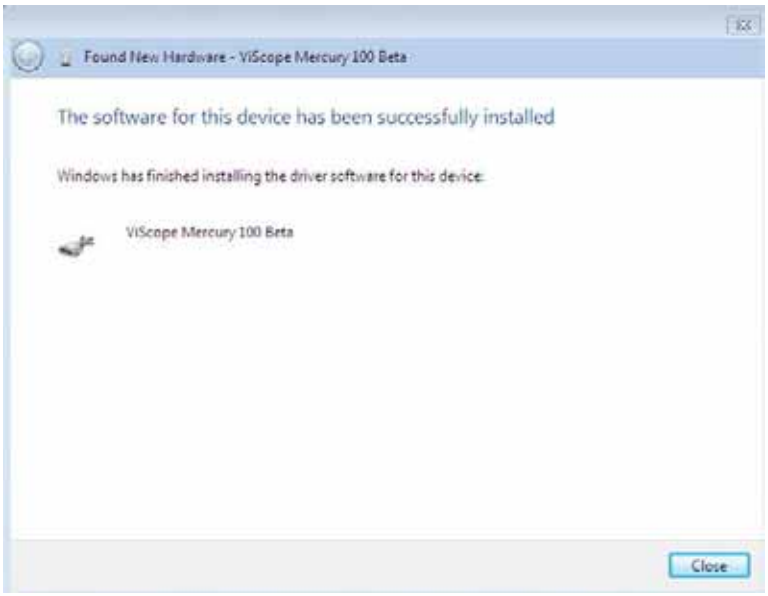
4. Select Next



5. Click Continue anyway

Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

6. **Click Finish.**

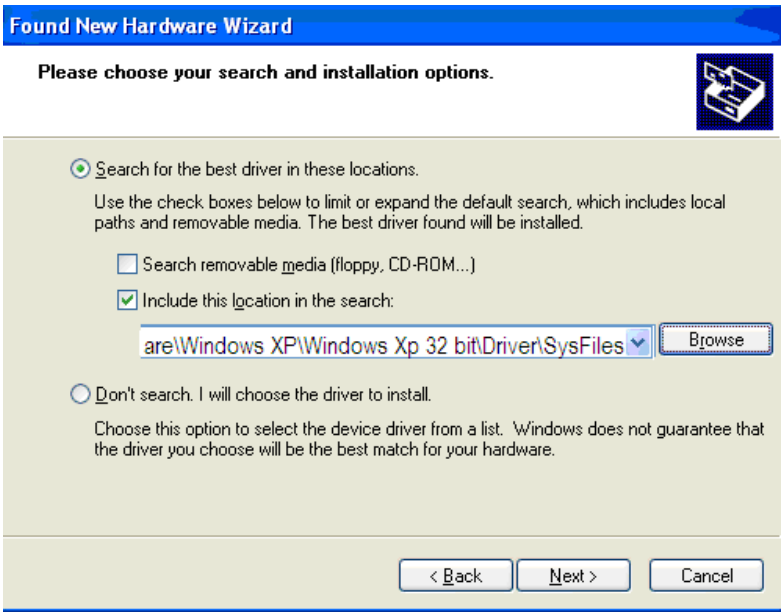

Found New Hardware - ViScope Mercury 100 Beta
The software for this device has been successfully installed
Windows has finished installing the driver software for this device:
ViScope Mercury 100 Beta
Close

7.3 Installation of Serial Port:

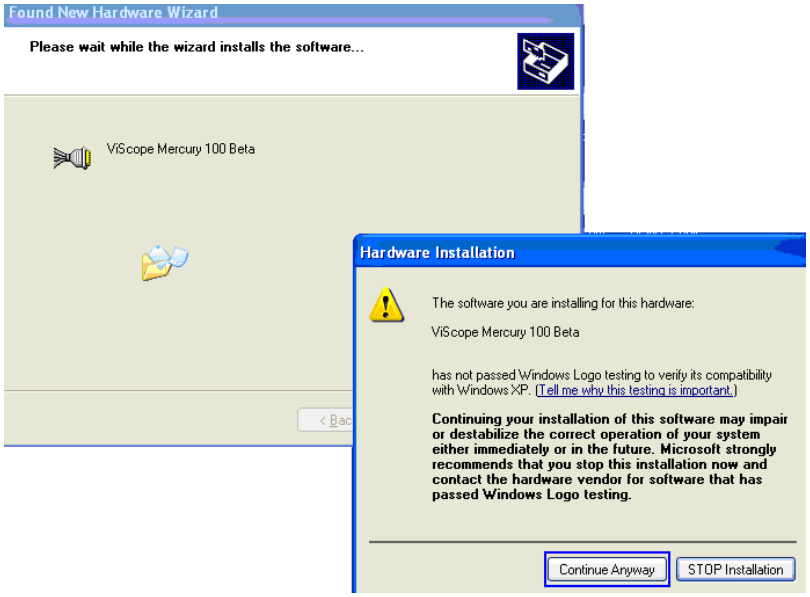
- **For Win XP**
  1. **Once the USB drivers are installed, Select second option "Install from list or specific location (Advanced)" from the next instruction screen that pops up. Select "Next"**

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
ViScope Mercury 100 Beta
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

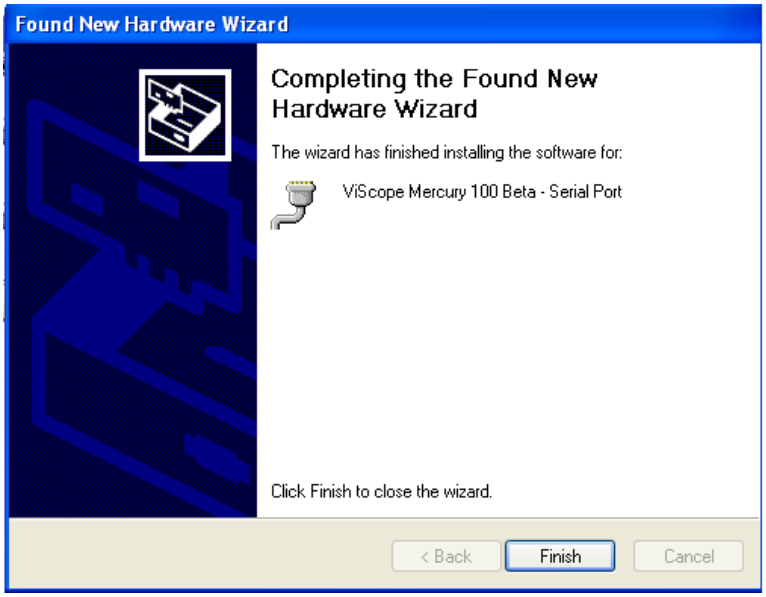
2. **Browse the same path as earlier "Data acquisition Software**Windows Xp \Windows Xp 32 bit**Driver\ SYS Files" & select "next"**


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
are\Windows XP\Windows Xp 32 bit\Driver\SysFiles
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

3. **This will complete the port - driver installation and the following screen will appear. Select "Continue Anyway"**


Found New Hardware Wizard
Please wait while the wizard installs the software...
ViScope Mercury 100 Beta
Hardware Installation
The software you are installing for this hardware:
ViScope Mercury 100 Beta
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

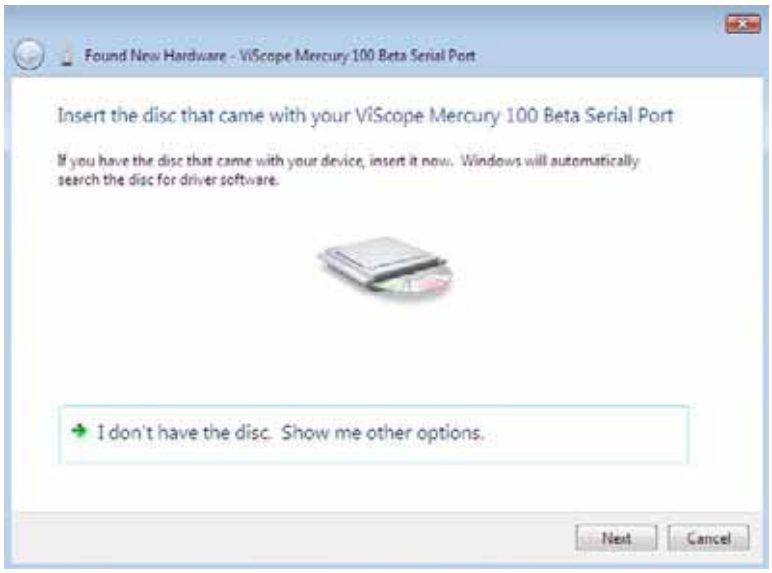
4. **Click "Finish"**


Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
ViScope Mercury 100 Beta - Serial Port
Click Finish to close the wizard.
< Back
Finish
Cancel

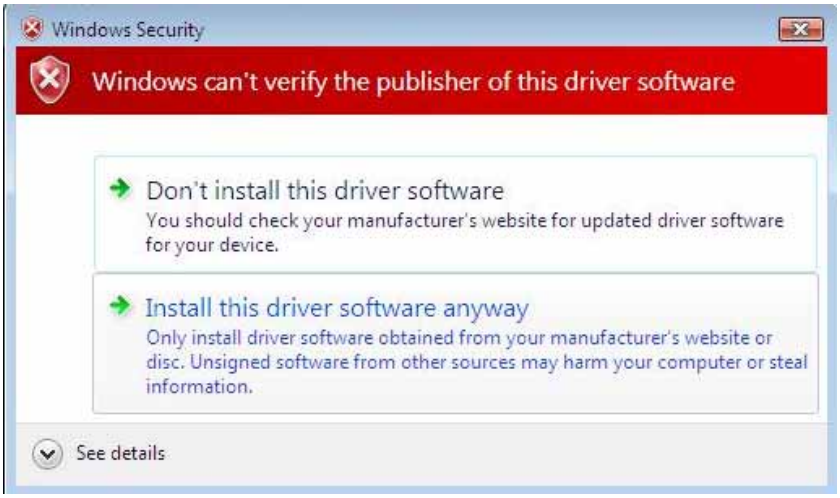
Plug out the device from the PC USB port and start the ViScope Recording and Playback Software V5.0 Setup procedure for installation as mentioned in Sec 7.4 below

- **For Vista:**

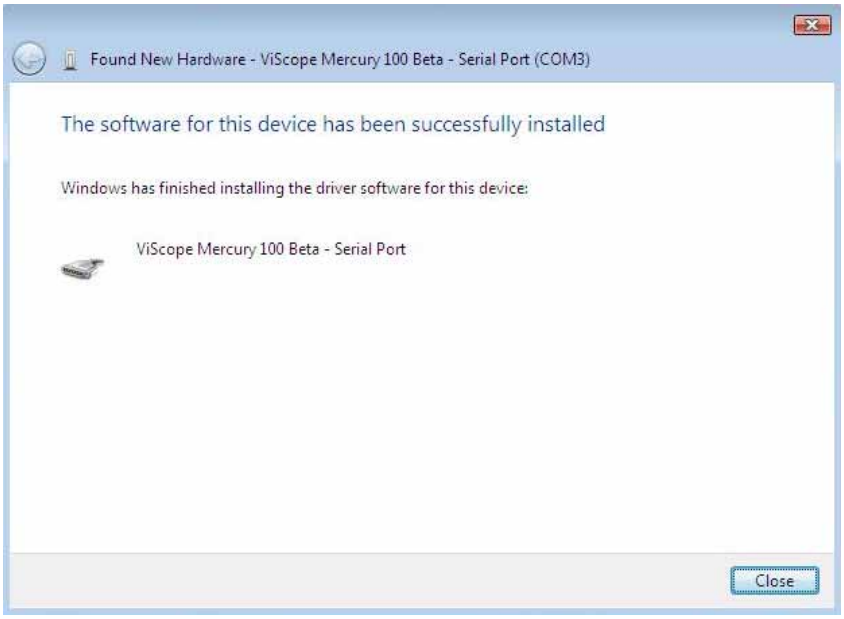
1. **Click “Next”**


Found New Hardware - ViScope Mercury 100 Beta Serial Port
Insert the disc that came with your ViScope Mercury 100 Beta Serial Port
If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.
I don't have the disc. Show me other options.
Next
Cancel

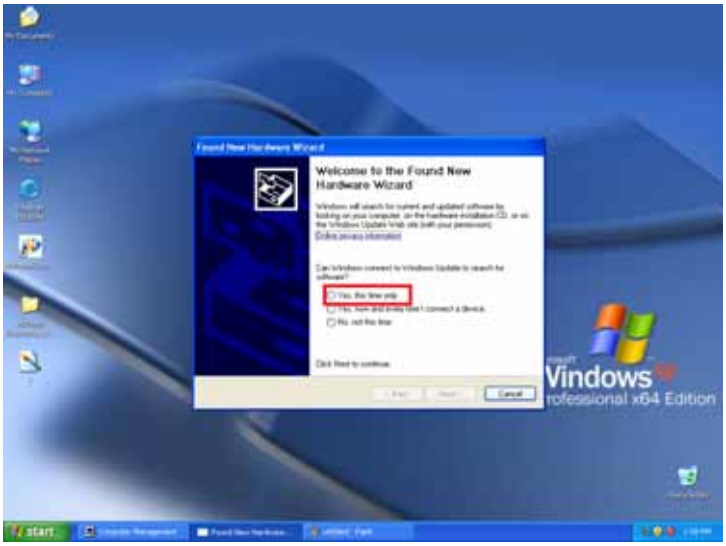
2. **Select “Install this Driver software anyway”**

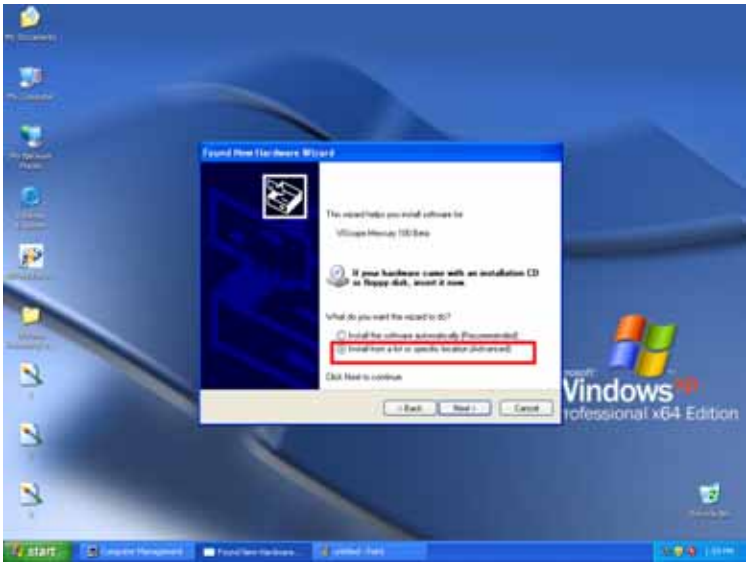

Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

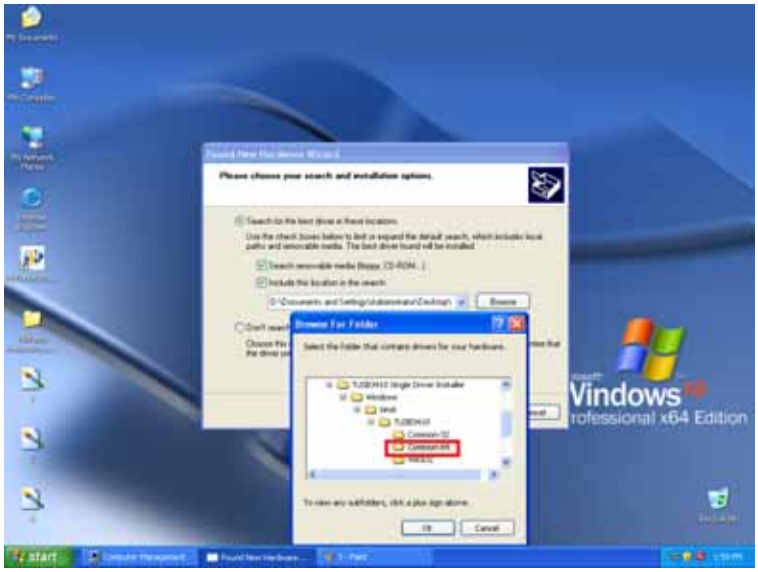
3. **Click “Finish”**

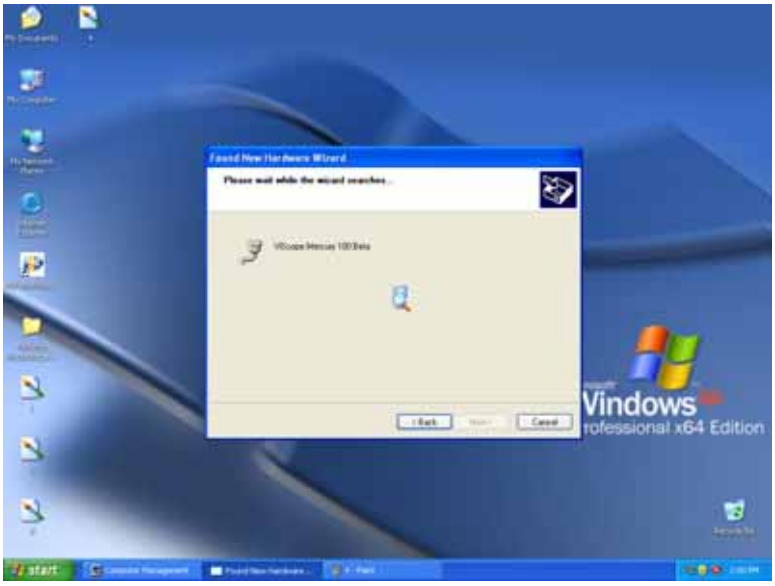

Found New Hardware - ViScope Mercury 100 Beta - Serial Port (COM3)
The software for this device has been successfully installed
Windows has finished installing the driver software for this device:
ViScope Mercury 100 Beta - Serial Port
Close

For Windows Xp 64 bit System:


Welcome to the Found New Hardware Wizard
Vindows
rofessional x64 Edition


Vindows
rofessional x64 Edition





Please wait while the wizard installs the software...
Hardware Installation
Continue Anyway
STOP Installation
Windows
Professional x64 Edition

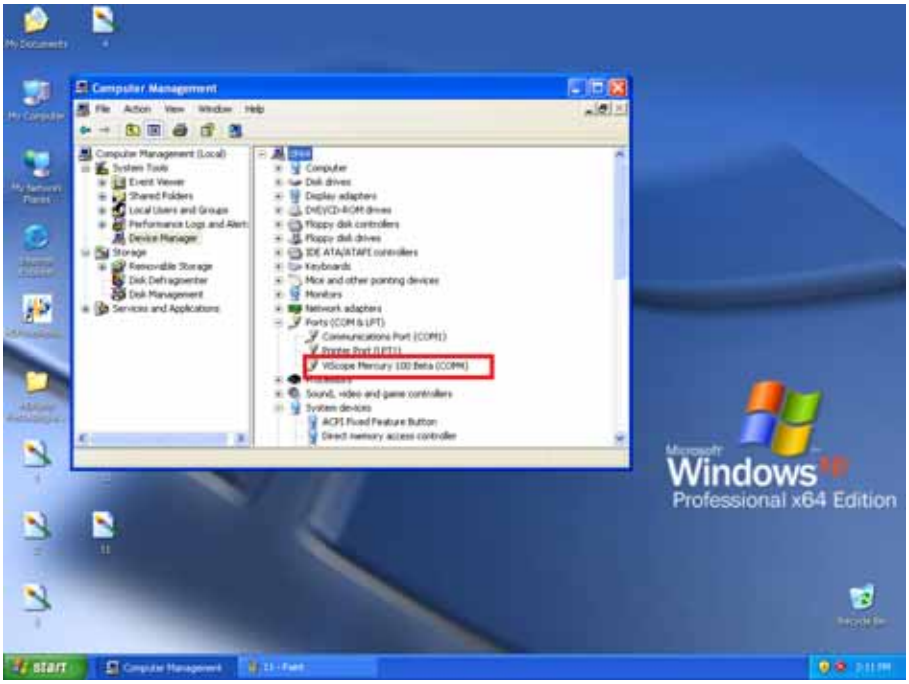
Please wait while the wizard installs the software...
Locate File
Open
Cancel
Windows
Professional x64 Edition

Please wait while the wizard installs the software...
Locate File
Windows
Professional x64 Edition
start

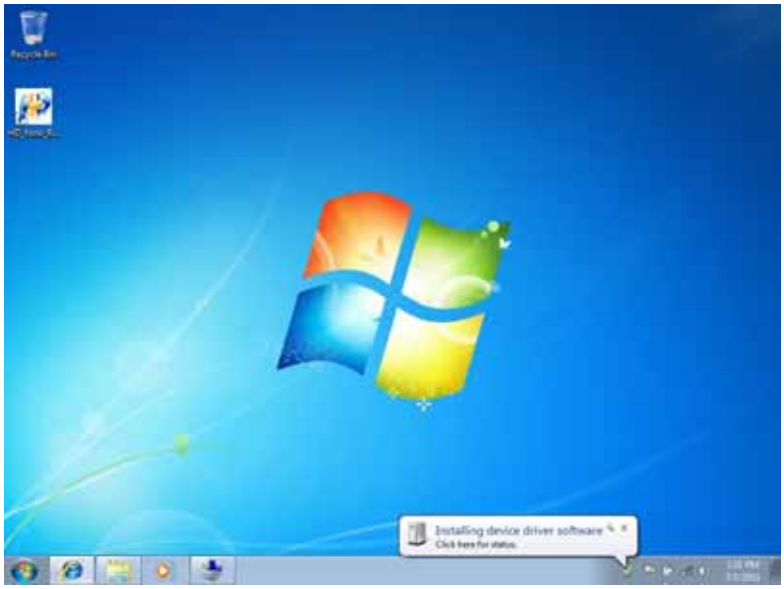
Please wait while the wizard installs the software...
Locate File
Windows
Professional x64 Edition
start

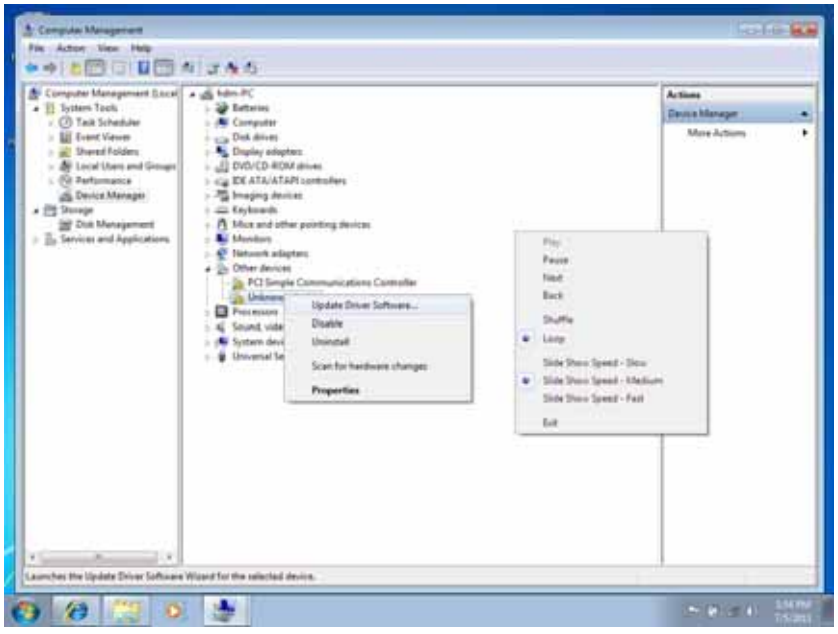
Completing the Found New Hardware Wizard
Finish
Windows
Professional x64 Edition
start

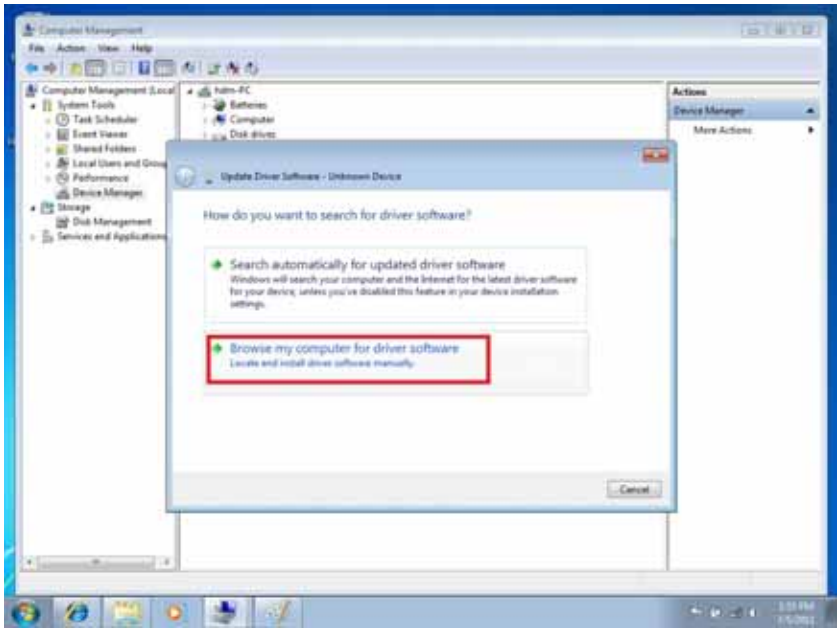
Windows
Professional x64 Edition
Found New Hardware
start

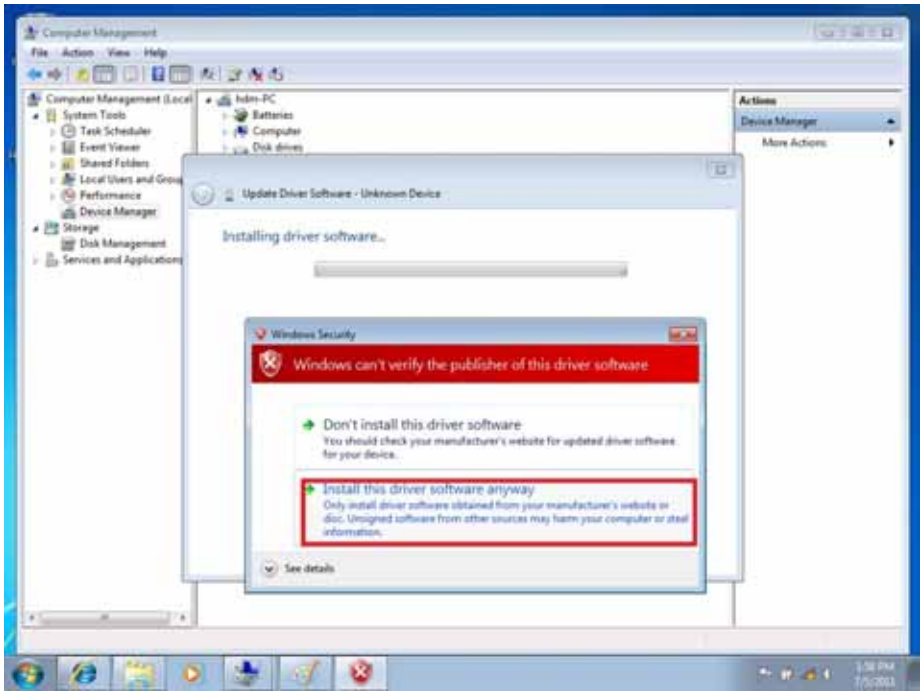


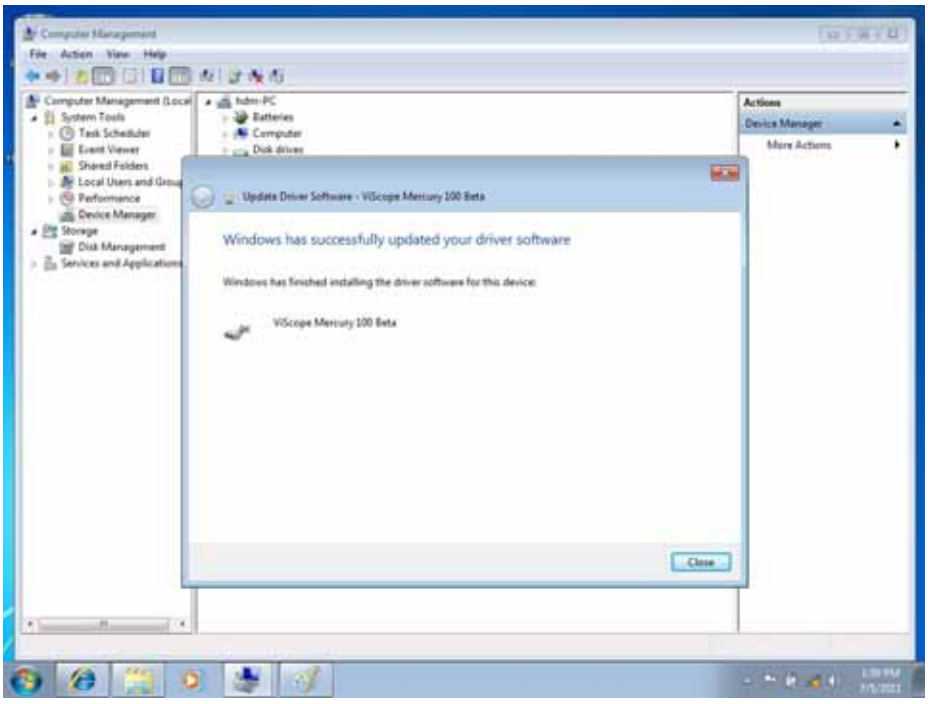
For Windows 7



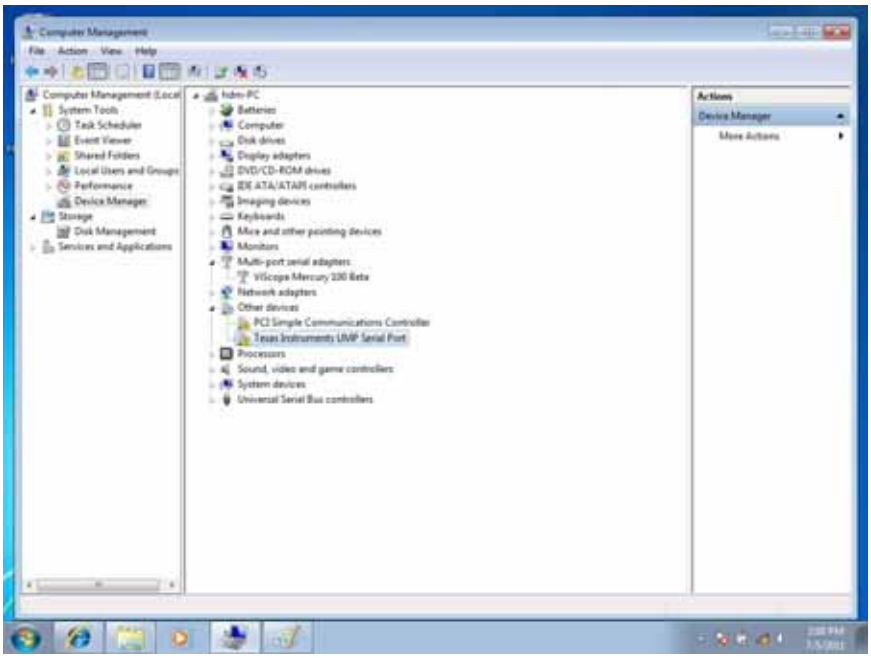


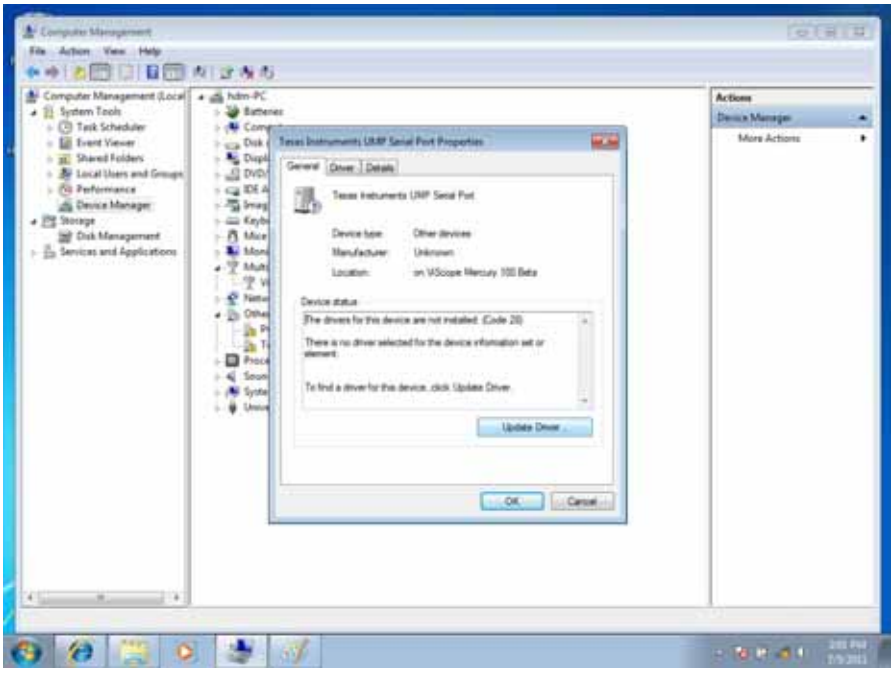

How do you want to search for driver software?
Search automatically for updated driver software
Browse my computer for driver software
Cancel

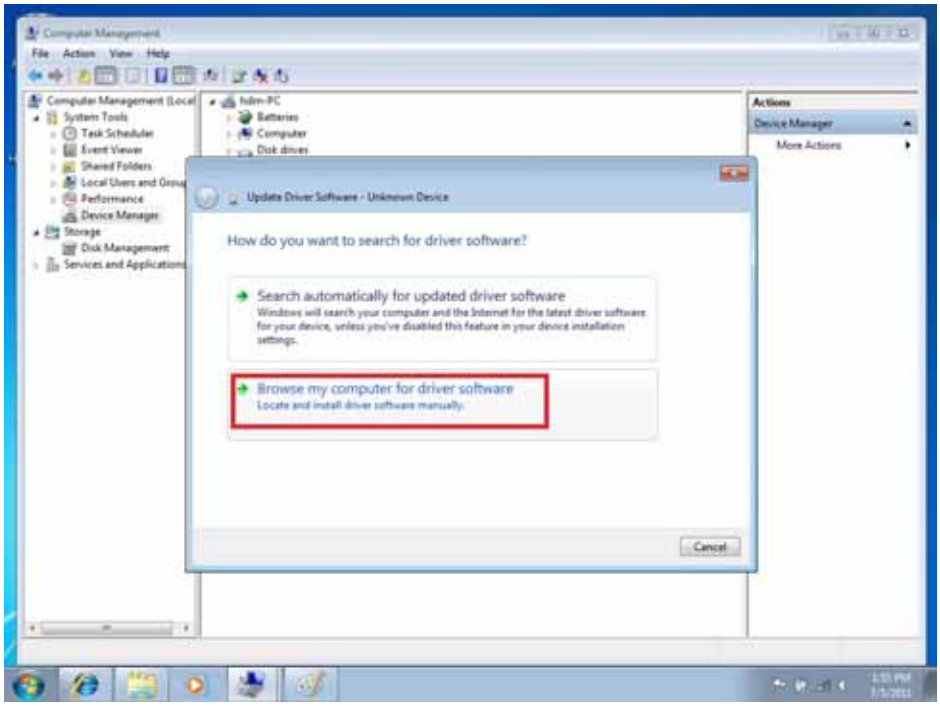

Computer Management
Update Driver Software - Unknown Device
Installing driver software...
Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

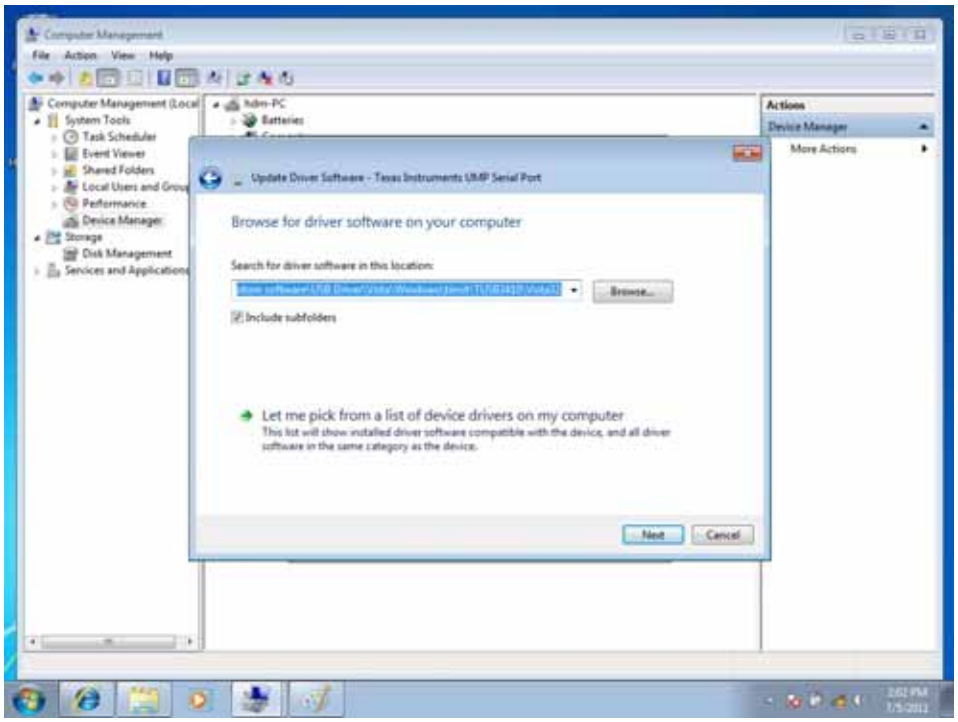

Computer Management
Update Driver Software - ViScope Mercury 100 Beta
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
ViScope Mercury 100 Beta
Close

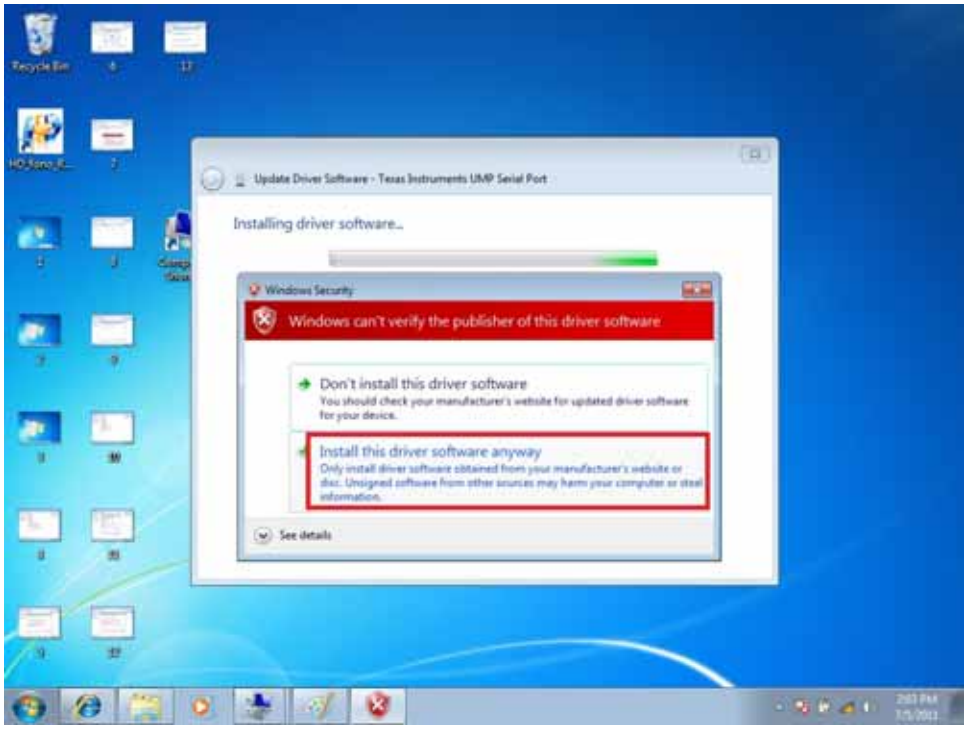
For Serial Port in Windows 7

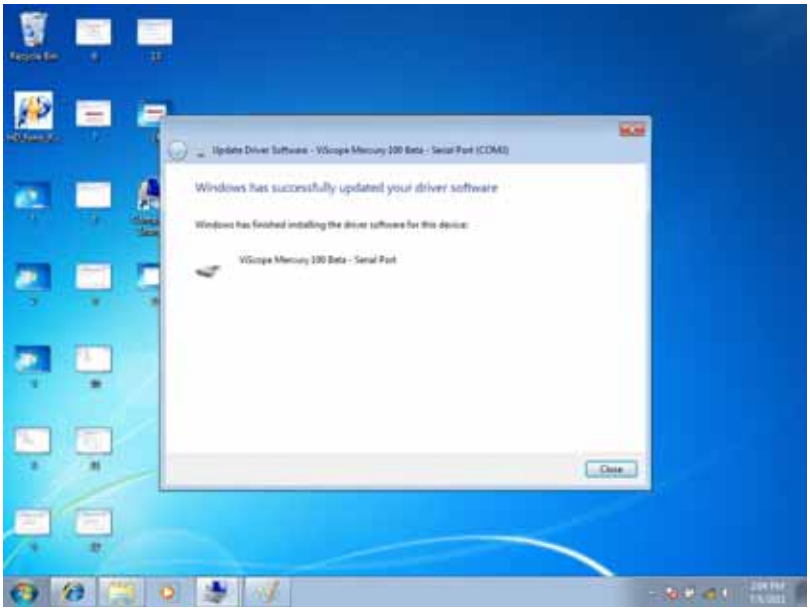


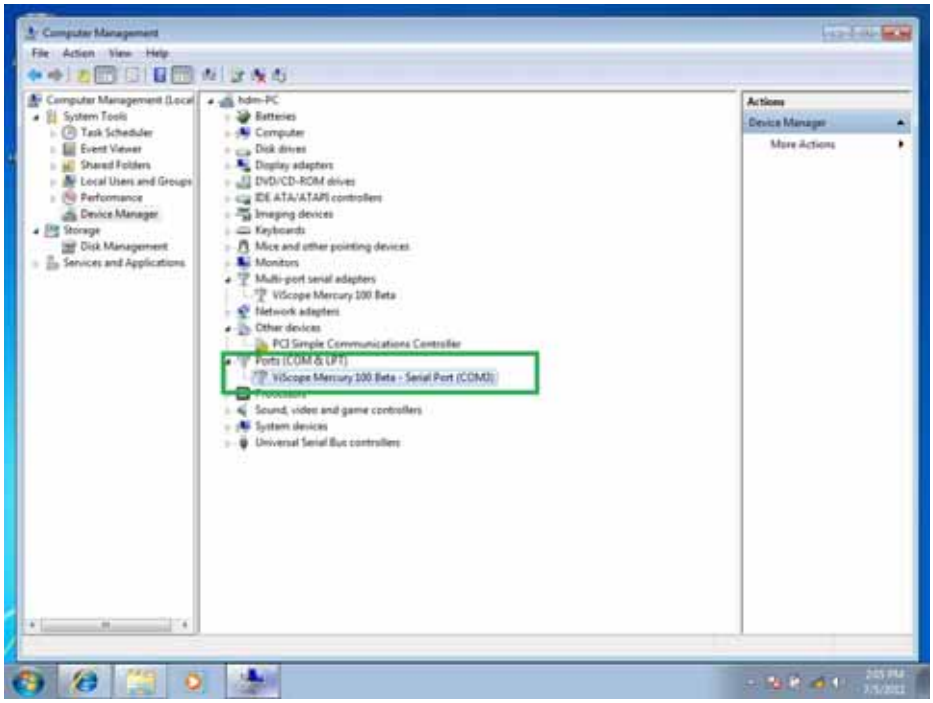



Computer Management
File Action View Help
Update Driver Software - Unknown Device
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
Browse my computer for driver software
Locate and install driver software manually.
Cancel
Actions
Device Manager
More Actions

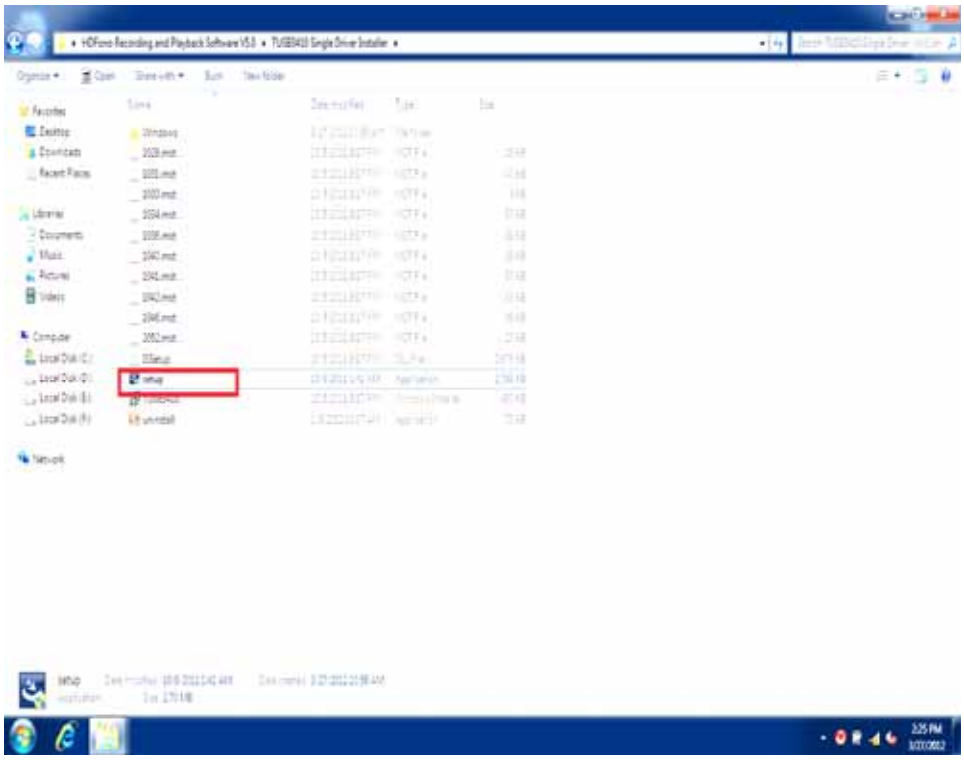

Computer Management
File Action View Help
Update Driver Software - Texas Instruments UMP Serial Port
Browse for driver software on your computer
Search for driver software in this location:
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel
Actions
Device Manager
More Actions

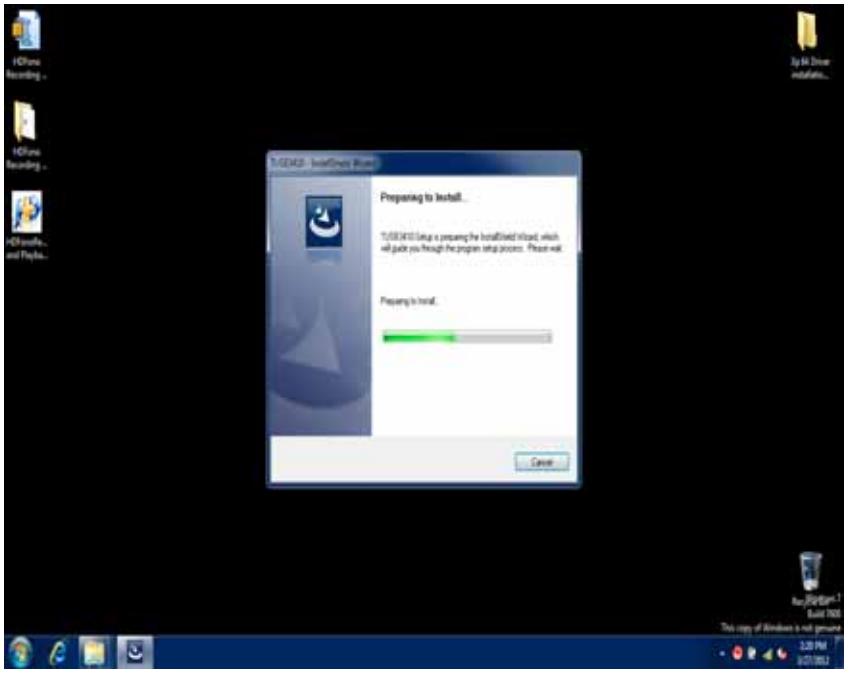

Update Driver Software - Texas Instruments UMP Serial Port
Installing driver software...
Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

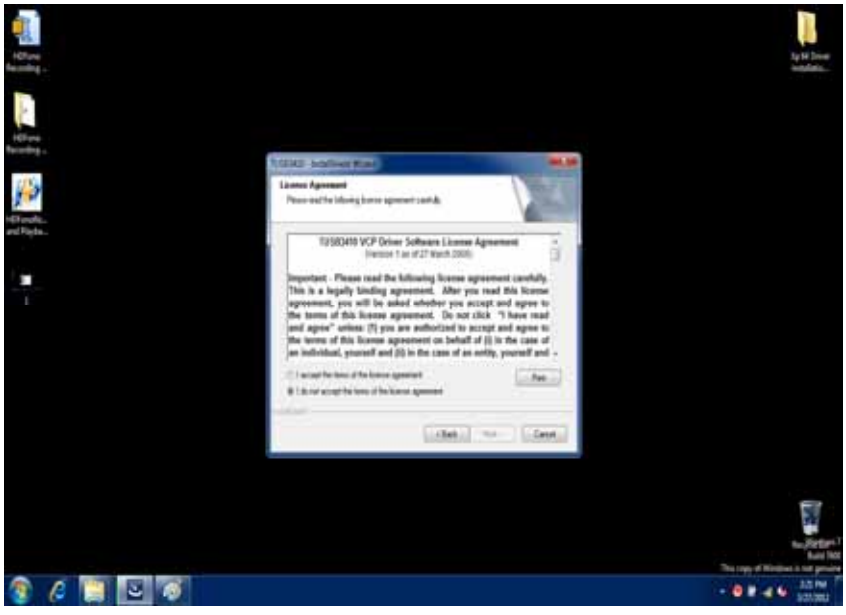

Windows has successfully updated your driver software
Close

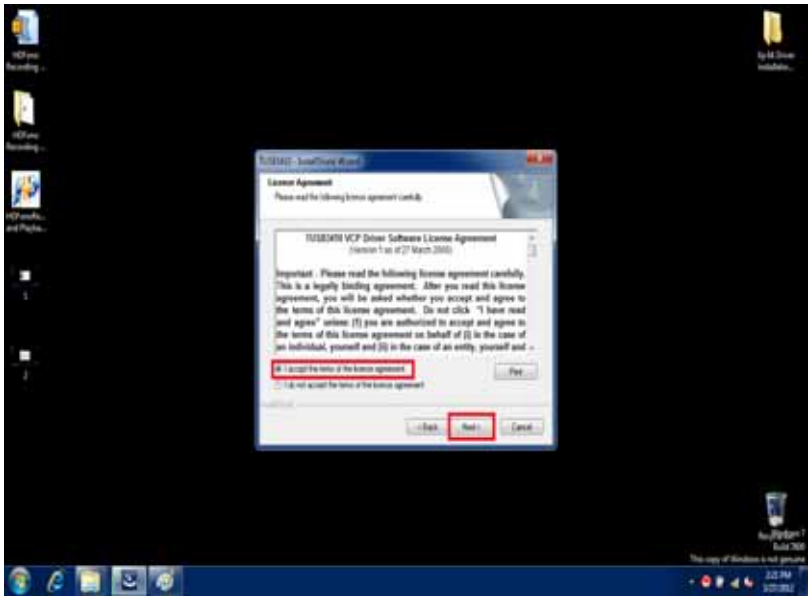

Computer Management
File Action View Help
Computer Management (Local
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and Groups
Performance
Device Manager
Storage
Disk Management
Services and Applications
hdm-PC
Batteries
Computer
Disk drives
Display adapters
DVD/CD-ROM drives
IDE ATA/ATAPI controllers
Imaging devices
Keyboards
Mice and other pointing devices
Monitors
Multi-port serial adapters
ViScope Mercury 100 Beta
Network adapters
Other devices
PCI Simple Communications Controller
Ports (COM & LPT)
ViScope Mercury 100 Beta - Serial Port (COM3)
Sound, video and game controllers
System devices
Universal Serial Bus controllers
Actions
Device Manager
More Actions

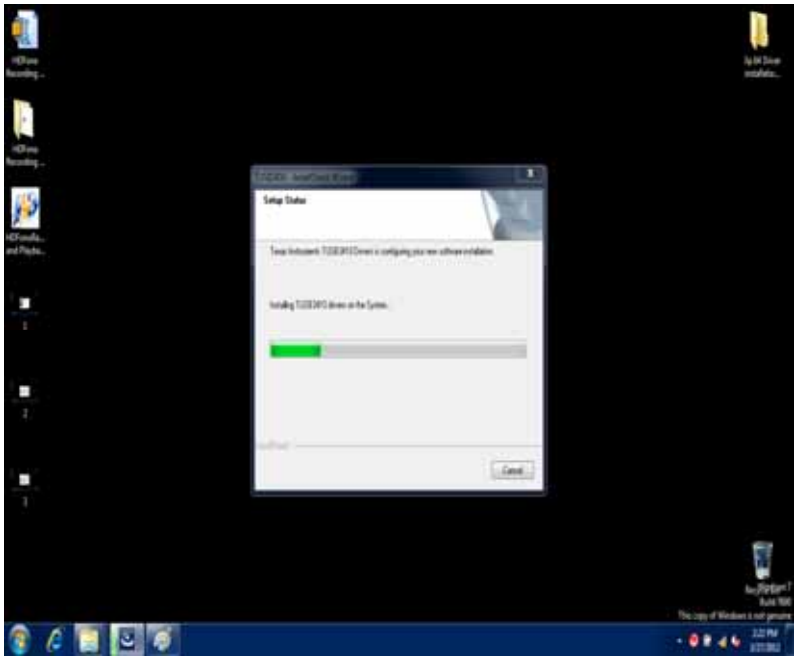
For Windows

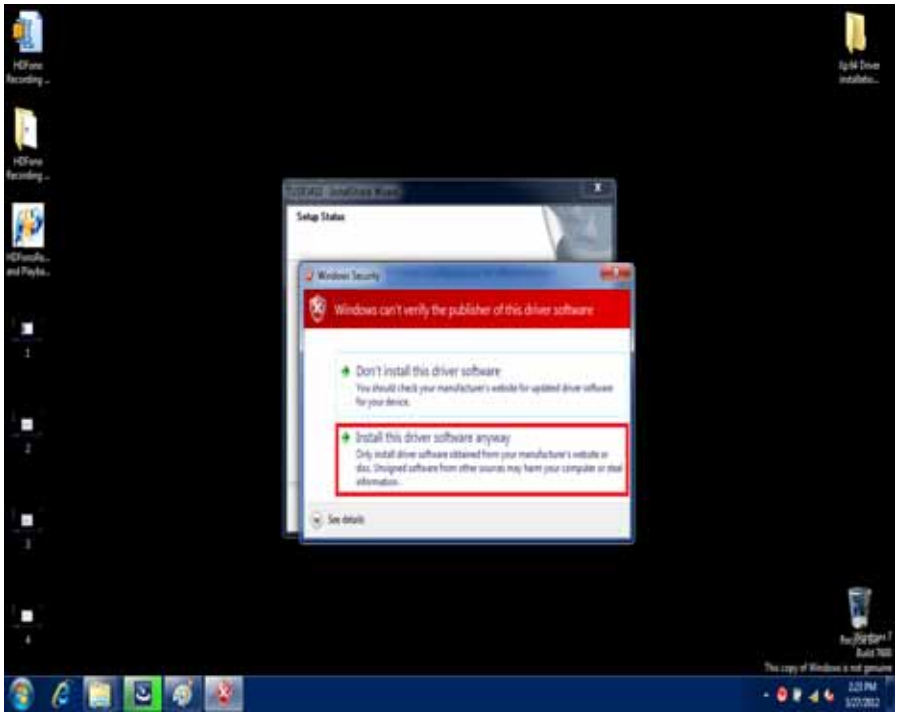

setup

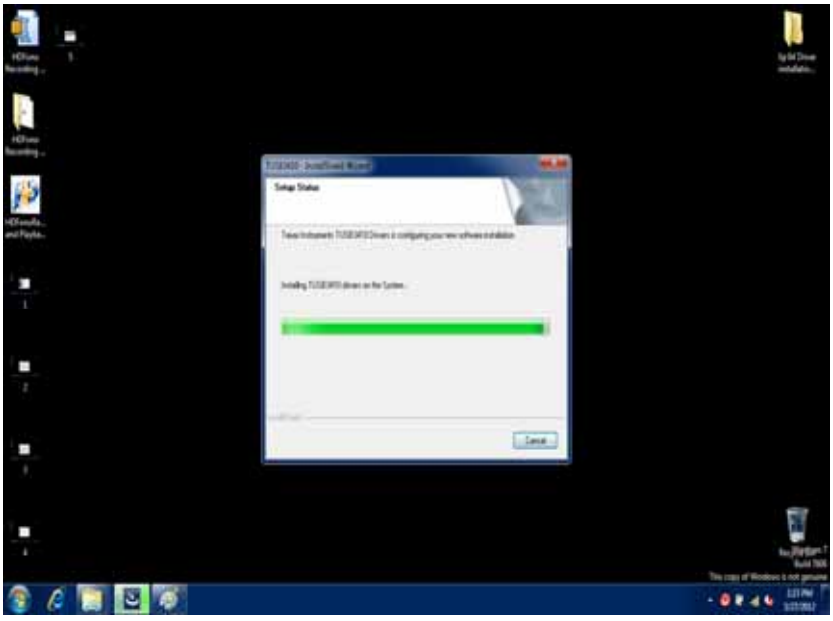

Preparing to Install...
Cancel

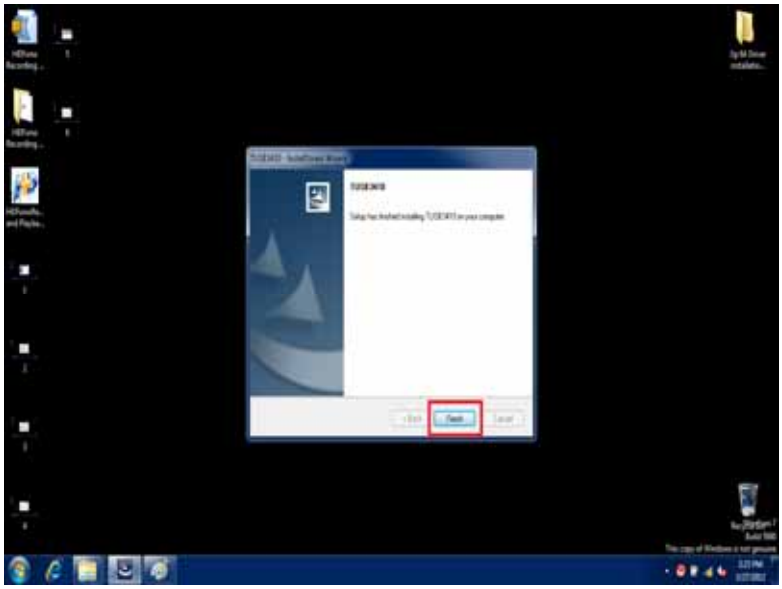

License Agreement
Please read the following license agreement carefully.
TUSB3410 VCP Driver Software License Agreement
Important - Please read the following license agreement carefully.
Print
< Back
Next >
Cancel

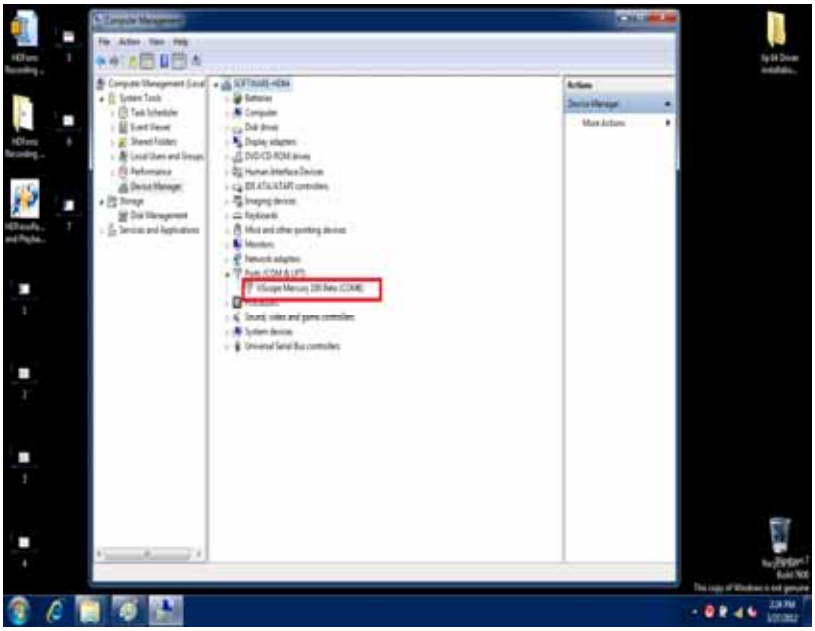





Setup Status
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details


Setup Status
Cancel





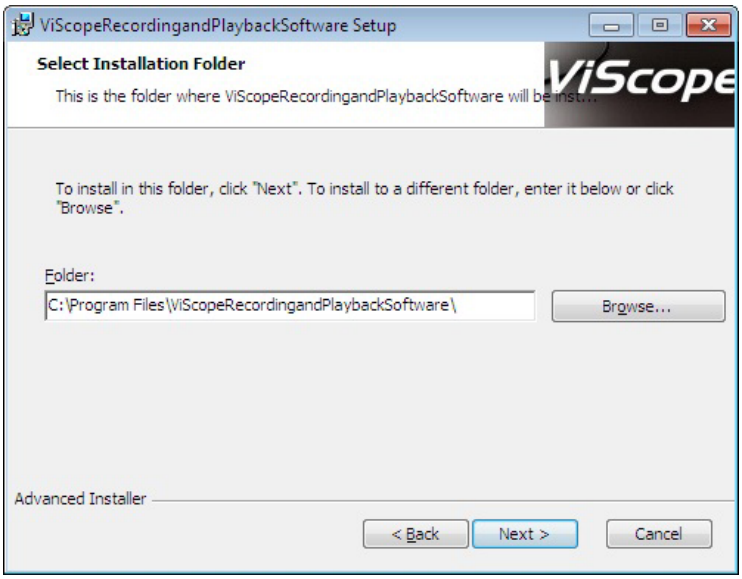
Plug out the device from the PC USB port and start the ViScope Recording and Playback Software V5.0 Setup procedure for installation as mentioned in Sec 7.4 below

7.4 ViScope Recording and Playback Software V5.0 installation

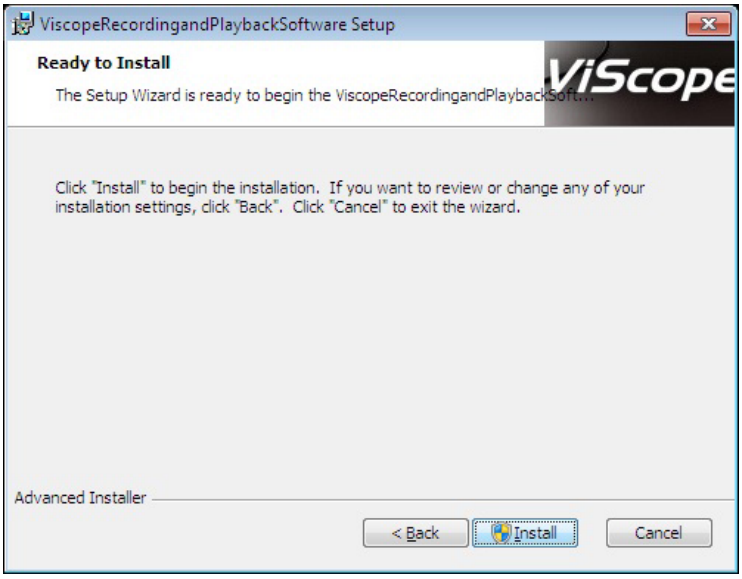
1. **Select the 'ViScope Recording and Playback Software V5.0 exe' from the contents of the CD.**
2. **Data acquisition Software→ ViScope Recording and Playback Software V5.0. Select "Next"**

ViScopeRecordingandPlaybackSoftware Setup
ViScope
HD Medical Group Limited
Welcome to the ViScopeRecordingandPlayback Software Setup Wizard
The Setup Wizard will install ViScopeRecordingandPlaybackSoftware on your computer. Click "Next" to continue or "Cancel" to exit the Setup Wizard.
< Back
Next >
Cancel

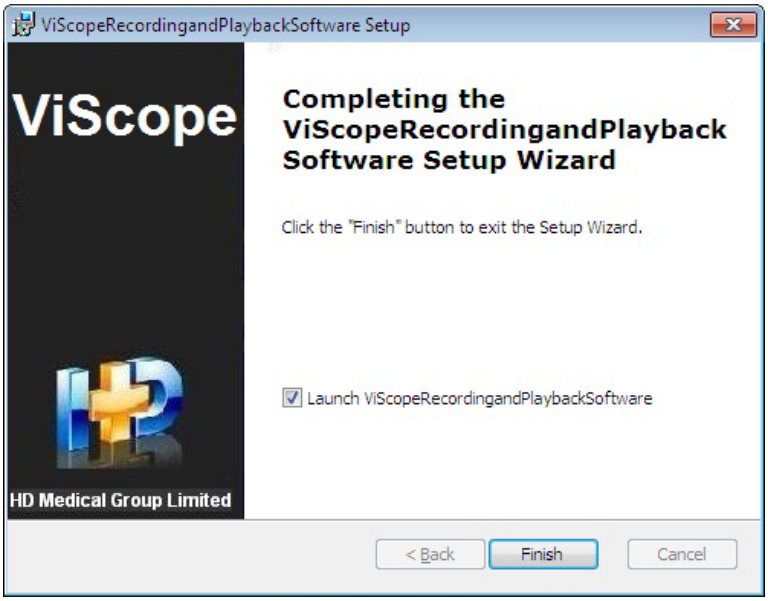
3. **It is recommended to install the software in the default location specified in the below screen and click "Next"**


ViScopeRecordingandPlaybackSoftware Setup
Select Installation Folder
This is the folder where ViScopeRecordingandPlaybackSoftware will be inst...
ViScope
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\ViScopeRecordingandPlaybackSoftware\
Browse...
Advanced Installer
< Back
Next >
Cancel

4. **This will automatically ask for confirmation to install; select "Install"**


ViscopeRecordingandPlaybackSoftware Setup
Ready to Install
The Setup Wizard is ready to begin the ViscopeRecordingandPlaybackSoft...
ViScope
Click "Install" to begin the installation. If you want to review or change any of your installation settings, click "Back". Click "Cancel" to exit the wizard.
Advanced Installer
< Back
Install
Cancel

5. **Once installation is complete, the following screen will be displayed**



6. **Select "Finish"**

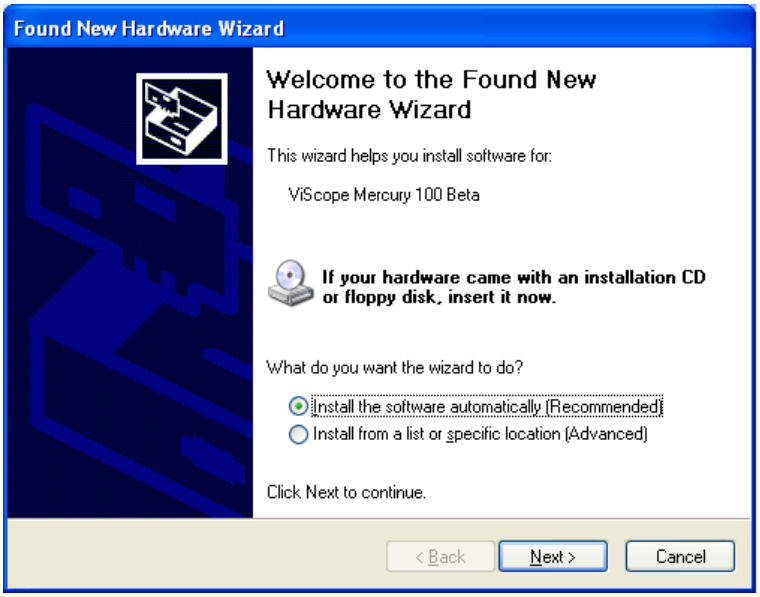
In case you need to start using 'ViScope Recording And Playback Software V5.0' immediately; you should click select the "Launch ViScope" option and make sure the device is first Powered ON and is then connected to the PC through the USB cable provided. The "New hardware detected & ready to use" pop up message window will appear.

A Desktop Icon will automatically display after completing the above installation

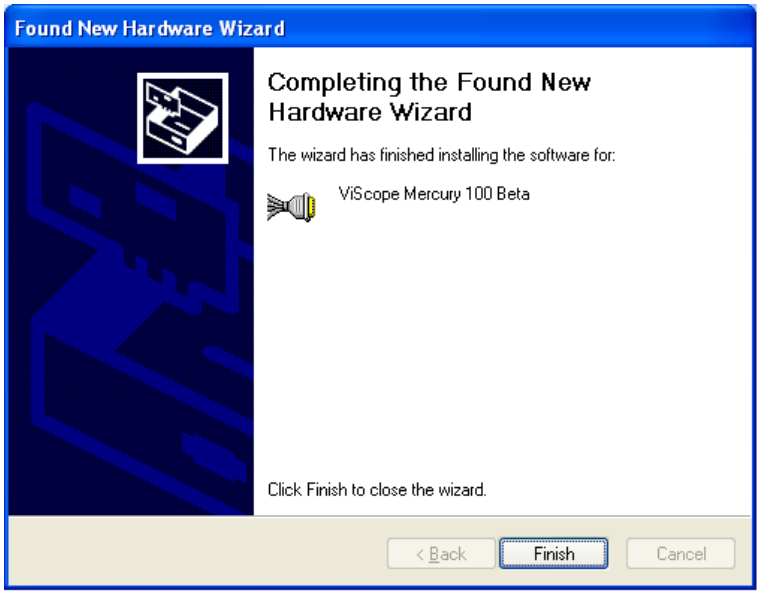
7.5 Connecting ViScope Device through Different USB Ports (For Xp)

1. **In case it is re-connected to a different USB port, the port detection installation should be re-run as follows:**

   a. **Select the first option "Install the software automatically (Recommended)" and click "Next"**


Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
ViScope Mercury 100 Beta
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

   b. **In case a verification testing screen appears click "Continue Anyway"**
   c. **Click "Finish" on the resulting screen**

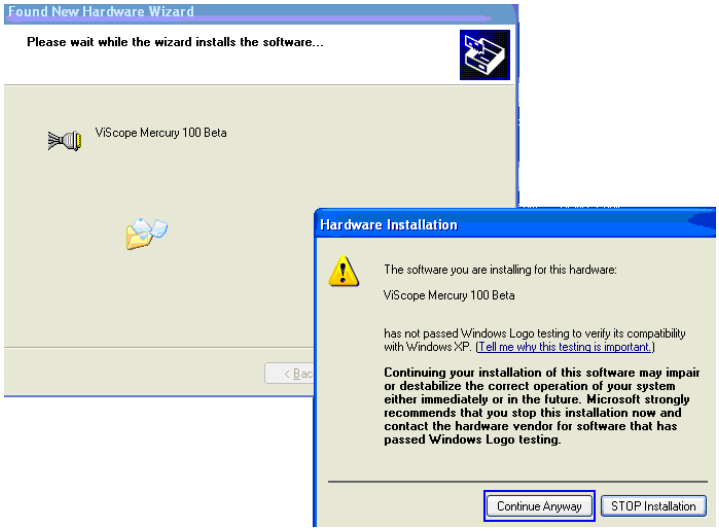

Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
ViScope Mercury 100 Beta
Click Finish to close the wizard.
< Back
Finish
Cancel

d. Now it would automatically install the port detection set up.

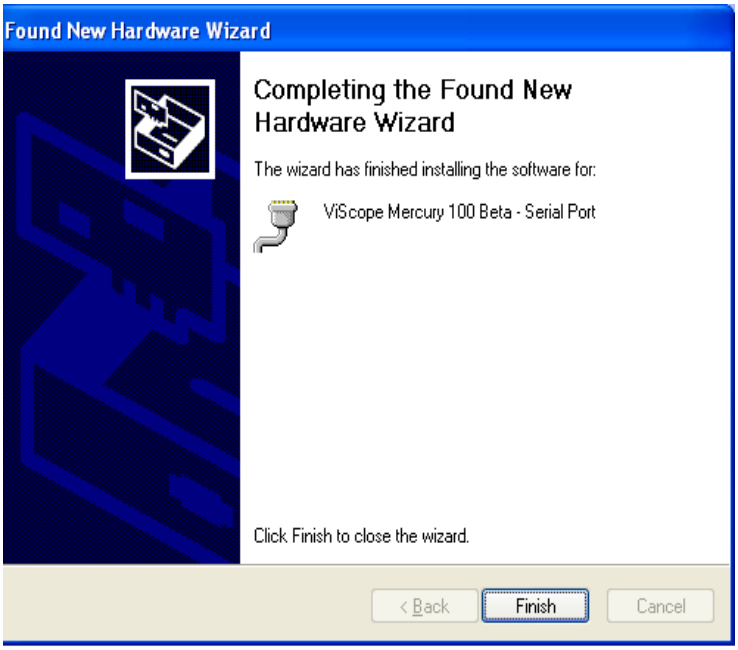
e. Select to detect automatically and continue by clicking "Next"

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
ViScope Mercury 100 Beta
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

f. Click "Continue anyway" in logo verification & testing pop up.


Found New Hardware Wizard
Please wait while the wizard installs the software...
ViScope Mercury 100 Beta
Hardware Installation
The software you are installing for this hardware:
ViScope Mercury 100 Beta
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

g. The final screen would appear as below


Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
ViScope Mercury 100 Beta - Serial Port
Click Finish to close the wizard.
< Back
Finish
Cancel

An audio confirmation can be heard after successful installation.

Disclaimer!
Anti-virus software can interfere with data collection from hardware devices. If by following the procedures mentioned above still if no signal displayed in the screen, please deactivate Anti-virus if installed/running and repeat the installation process.

Check whether the Device and PC are connected through USB port, (Mini USB end of connector cable to ViScope device, and other end to PC)

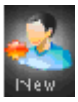
The device should be Powered ON

- **Launch ViScope Recording and Playback Software V5.0 by double clicking the short cut icon on the desktop.**
- **Alternatively select "ViScope Recording and Playback Software V5.0" under the complete list of "Programs" from "Start menu". The opening screen displaying the controls and the sound signal from ViScope device is displayed below.**

Opening Screen of ViScope Recording and Playback Software V5.0

(To know more about Operations of VISCOPE , refer to the User Manual)

Tools & Their Functions

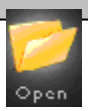
7.6 "New" Button 

The Software automatically obtains Real time data signals coming from ViScope device as it is activated. Irrespective of the display on the PC screen, when "New" button is clicked, entire screen is refreshed and the real time signal from the device is displayed.

7.7 "Refresh" Button

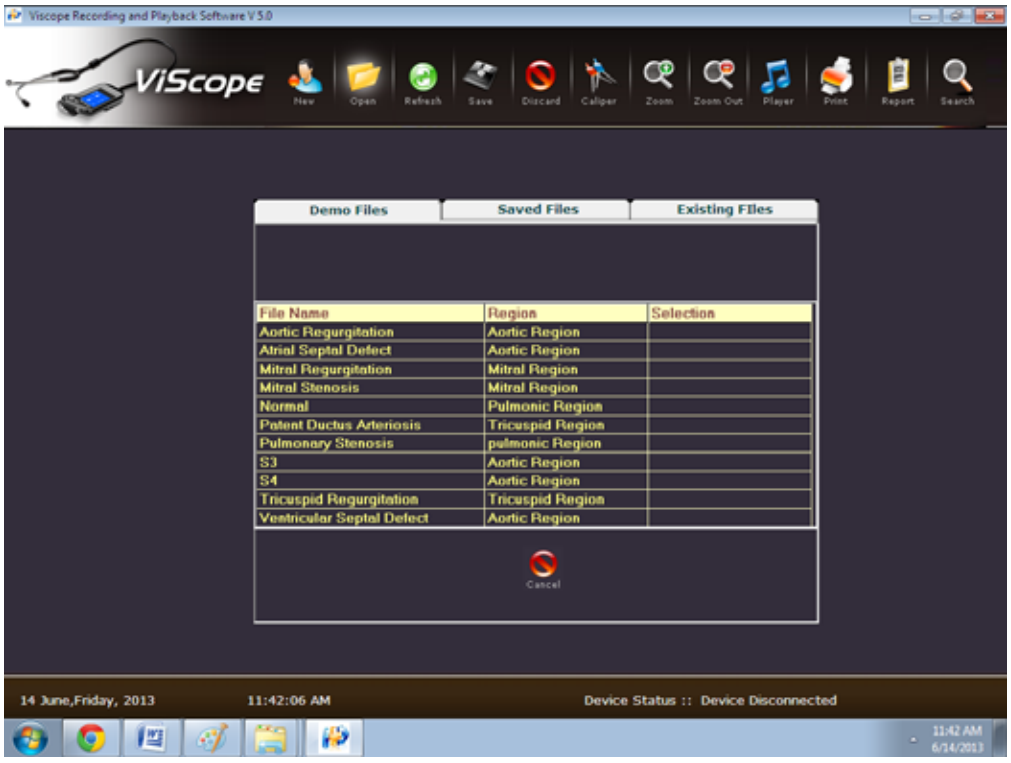
The Software automatically obtains Real time data signals coming from ViScope device as it is activated. Irrespective of the display on the PC screen, when "Refresh" button is clicked, entire screen is refreshed and the real time signal from the device is displayed.

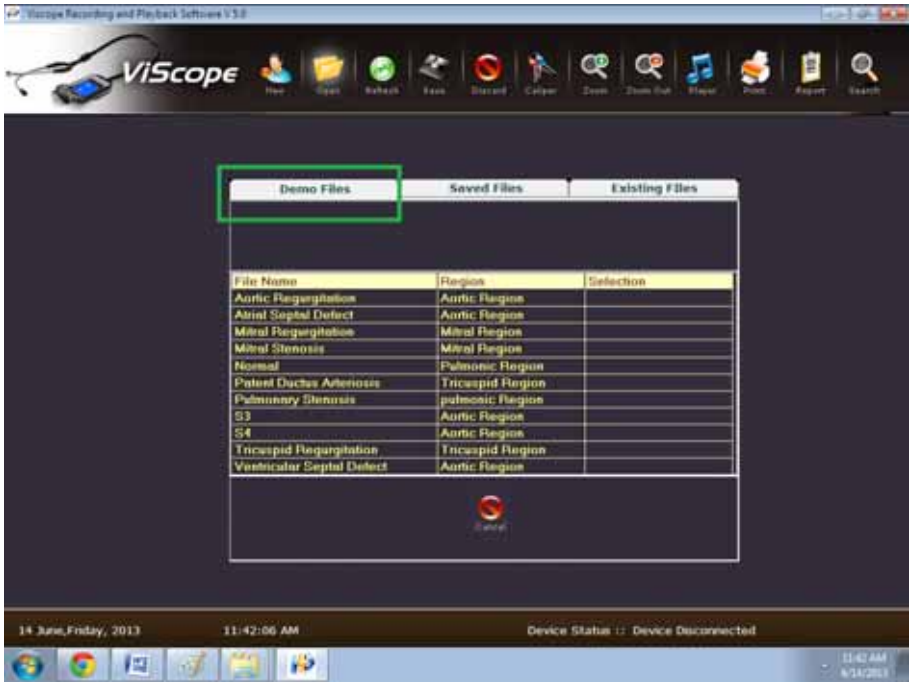
Message screen "Device not connected" appears if "Refresh" button is clicked without connecting a Powered ON ViScope device.

7.8 "Open" Button 

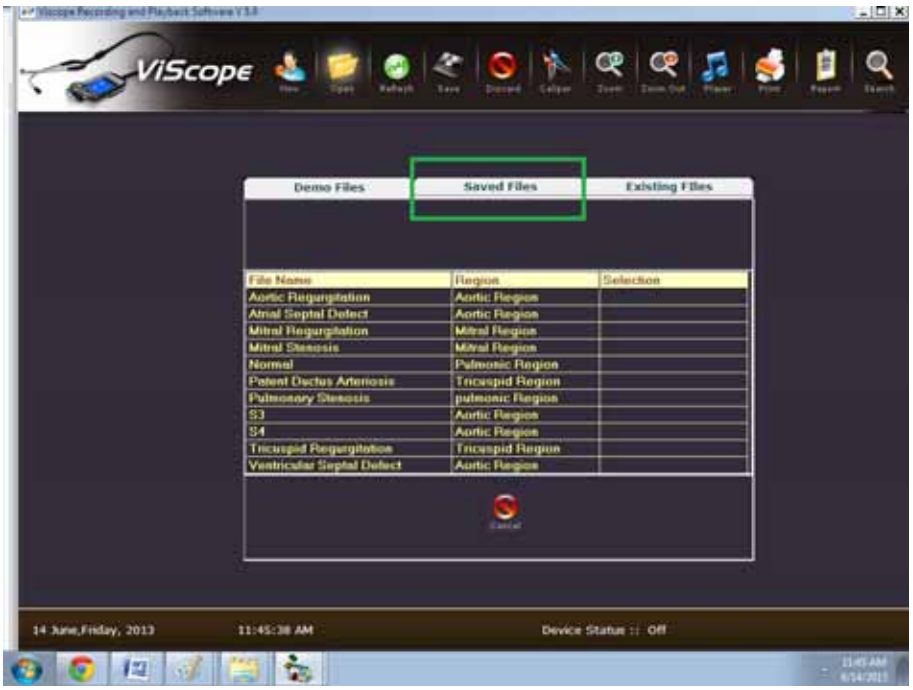
The "Open" button is used to open a saved heart sound signal.

1. **By clicking open button three tabs displaying "Demo files", "Saved files" and "Existing files" will be displayed. The user can select any one of these tabs and select the listed files under each tab.**
2. **Demo files are the "Tutorial waveforms" for understanding normal/abnormal heart sounds where as, Saved files are user saved files and the Existing files option helps user to open the already existing 10 second files saved in wave format.**

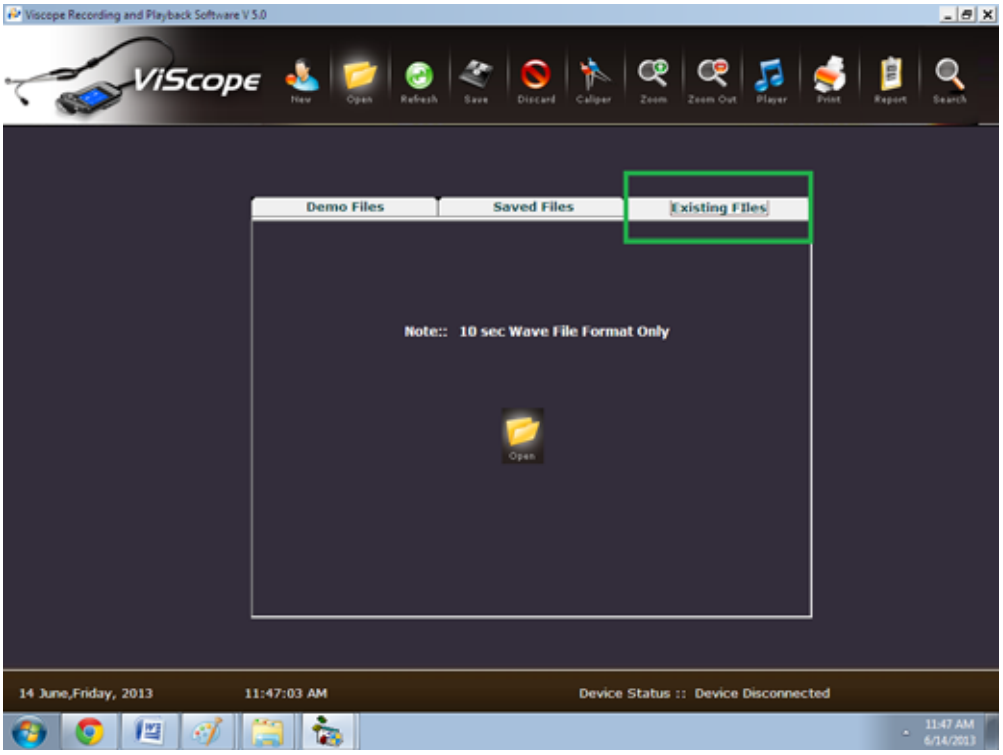



ViScope
Demo Files
Saved Files
Existing Files
File Name
Region
Selection
Aortic Regurgitation
Aortic Region
Atrial Septal Defect
Aortic Region
Mitral Regurgitation
Mitral Region
Mitral Stenosis
Mitral Region
Normal
Pulmonic Region
Patent Ductus Arteriosus
Tricuspid Region
Pulmonary Stenosis
pulmonic Region
S3
Aortic Region
S4
Aortic Region
Tricuspid Regurgitation
Tricuspid Region
Ventricular Septal Defect
Aortic Region
14 June,Friday, 2013
11:42:06 AM
Device Status :: Device Disconnected

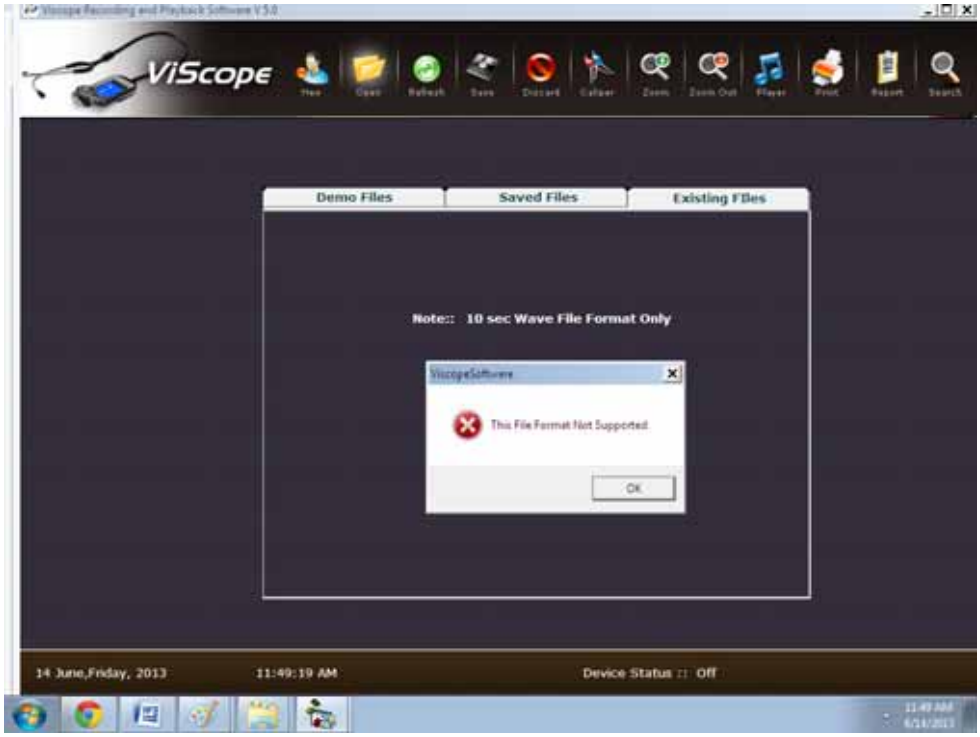
ViScope
MURMUR
RAW
LUNG
File :: Demo_Aortic Regurgitation_Aortic Region
MURMUR
RAW
Mitral Regurgitation
Patent Ductus Arteriosis
Normal
Test
12/Dec/2011 12-07-49 PM
12/Dec/2011 12-11-20 PM
12/Dec/2011 12-11-28 PM
12/Dec/2011 12-16-07 PM
29 March,Thursday, 2012
11:24:33 AM
Device Status :: Ready For Processing



When the already saved files are opened the 10 seconds waveform will be displayed.



Existing files option helps user to open the already existing files saved in wave format.



ONLY WAVE FILES WILL BE SUPPORTED

7.9 "Freeze" Button from Device (not in the software)

The Acquiring is done by clicking 'Freeze' button present in the device & auscultating patients for 10 seconds using the ViScope device.

1. **Position the ViScope device suitably on the patient and wait till the real time heart sound signal stabilizes.**
2. **Check if the Real time data signal falls within the Upper and Lower limits provided. If not, adjust the Visual Gain of ViScope device to a suitable level and obtain the required signal.**

3. After placing the device on patient for auscultation click the "Freeze" button in the ViScope device and wait till the device completes its recording.
4. The acquired screen corresponds to 10 seconds of stationary trace of heart sound signal after the pressing of Freeze button

NOTE: Just acquiring signal by pressing "Freeze" in ViScope device by itself does not "SAVE" a heart sound signal to the PC.

In order to save an acquired signal, perform the "SAVE" Operation.

Note:

To obtain a good signal without much external noise ensure that the Real time data signal obtained lies within the upper & lower limit lines.

After clicking 'Freeze' wait, do not perform any other operation till 100% signal is acquired.

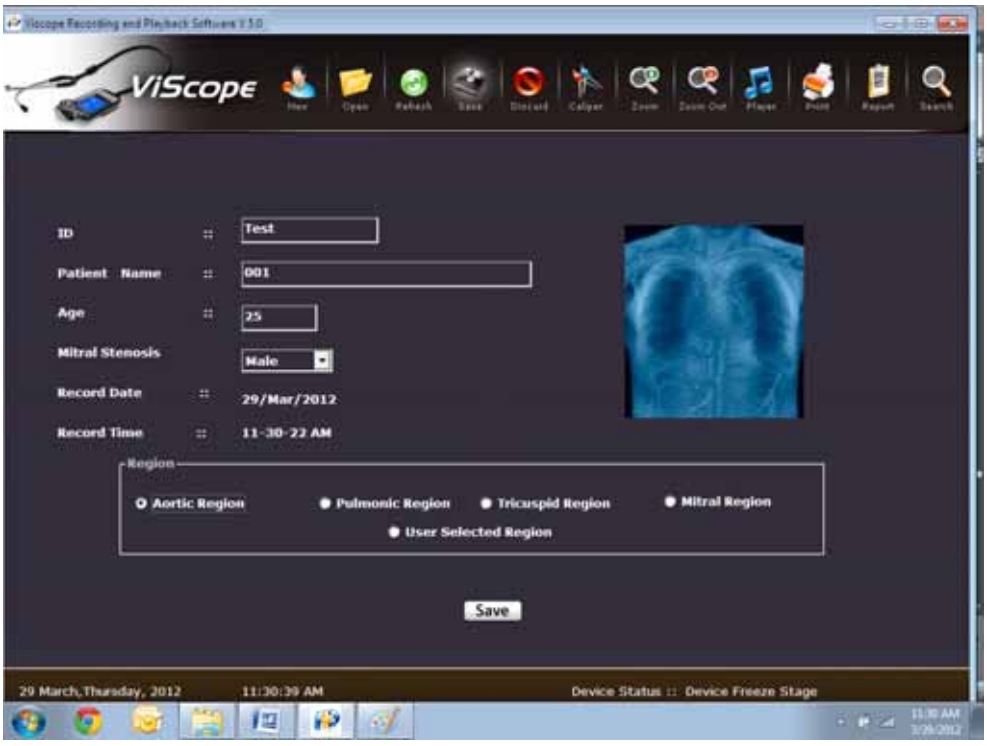
7.10 "Save" Button

The "Save" button is used to save an acquired signal in ".wav" format to the PC memory for further reference.

1. **First acquire 10 Seconds Signal by pressing Freeze button in the device.**
2. **Click 'Save'.**
3. **Select position of Auscultation and Enter Patient ID if desired.**
4. **Select 'Save'.**
5. **The files are saved in the default folder**
   "C:\Program files\ ViScope Recording and Playback Software V5.0\ ViScope Wave Files" or to the desired folder destination the user had installed the software.

> **NOTE: A patient name cannot contain any of the following characters "" / \ ? | * & < > :**

It is recommended to save all files under this folder date wise or as preferred by user in a systematic manner.



6. Provide a file name, select a position, entering patient id, patient name, age and sex click “Save”.

NOTE:
If Patient’s Name & ID is left blank the file will be saved with No ID_No Name_Region as reference.

7.10.1 Transferring of waveforms to PC

1. For simultaneous signals acquisition/waveforms transfer the user has to click ‘New’ button.

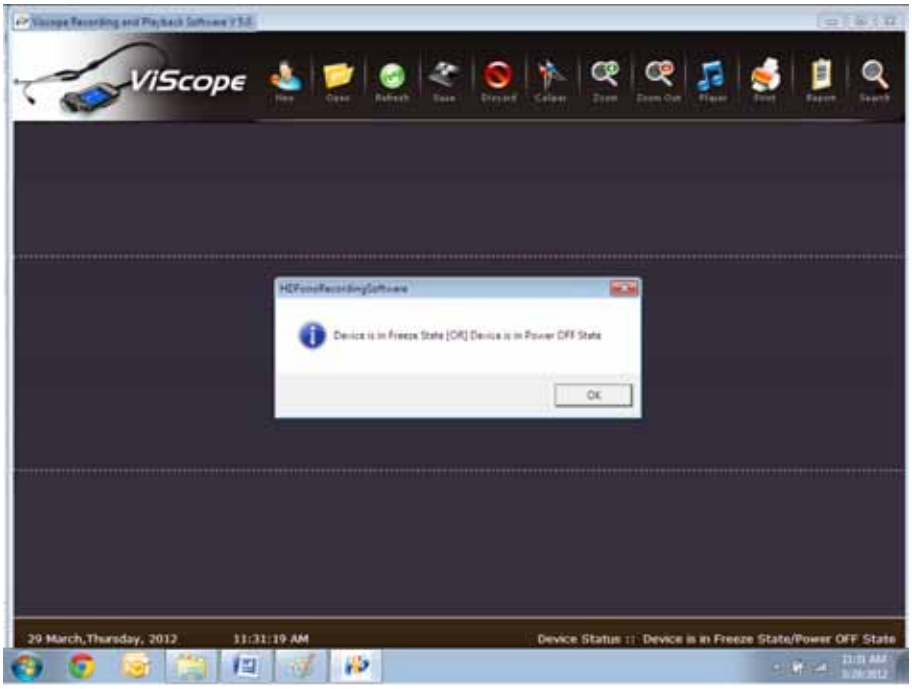
NOTE:
- Transfer of signals should be done within 360 secs after connecting it to the PC.
- If USB cable left along with the device for 360 seconds, it is a must to remove the USB cable and switch ON the device & PC software again.
- If printer icon is pressed instead of transfer icon in the device the software needs to be restarted again along with the device.

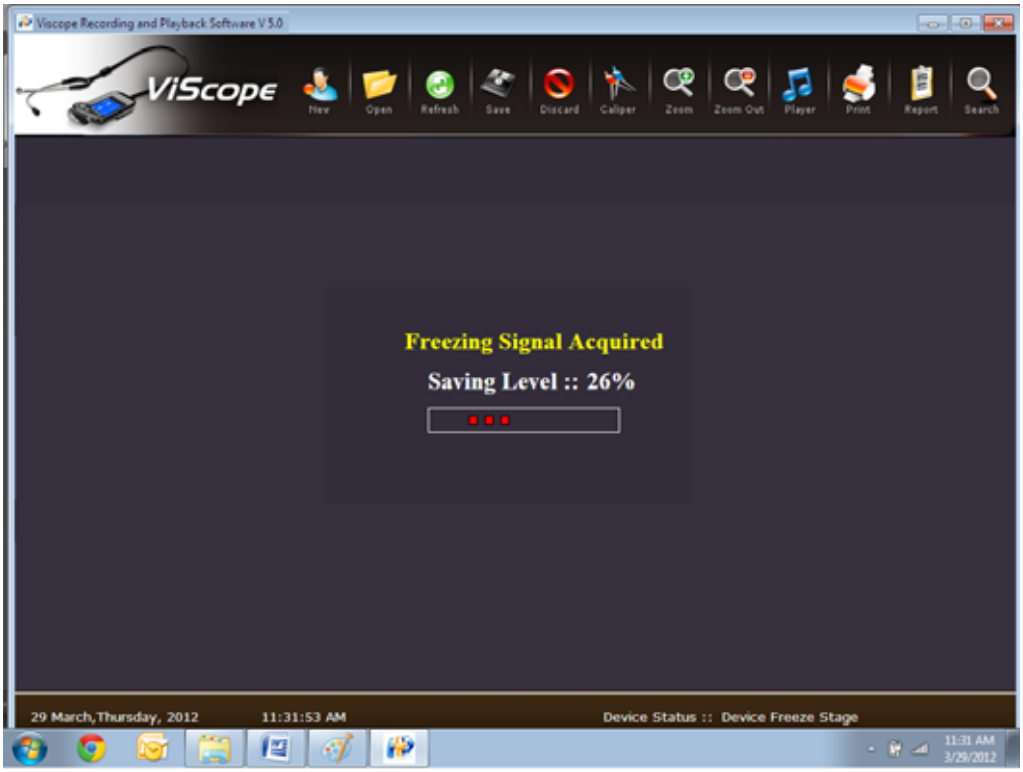
2. The stored waveforms in the device can be transferred to PC for further analysis.

3. When the device is in freeze mode with the desired waveform[s] saved in the device. By connecting the device to the PC via USB cable, by opening the software and pressing “Transfer” icon in the device the stored waveforms can be transferred to the PC for analysis.

Please check the device user manual to know more about the waveforms transfer.

4. Once the waveforms are transferred to PC, Save, Zoom, Caliper, Print options will be activated for analysis.

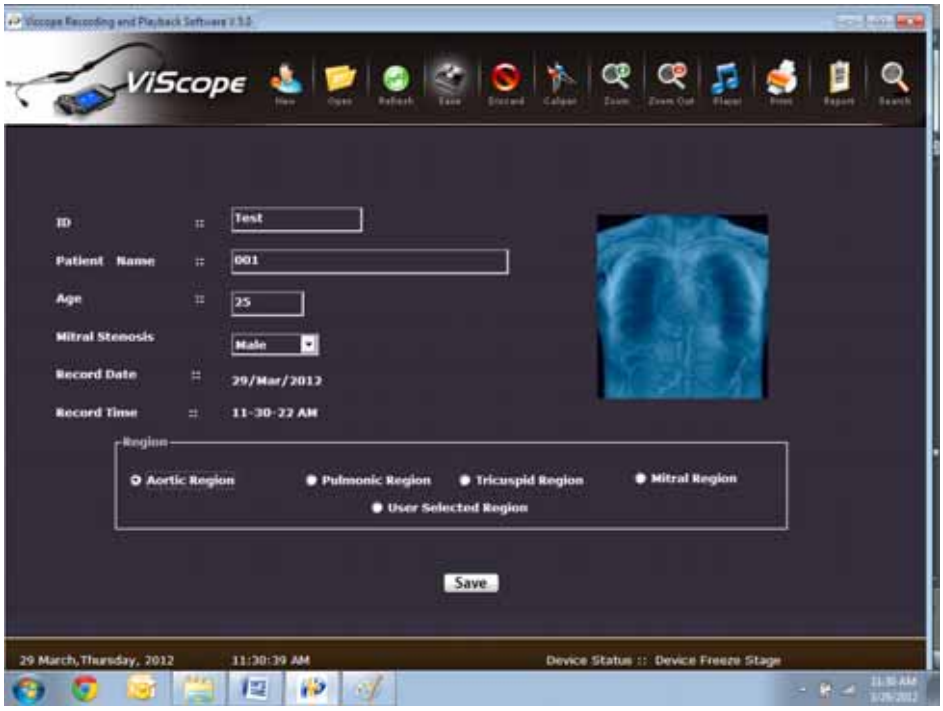

ViScope
Device is in Freeze State [OR] Device is in Power OFF State
OK
29 March,Thursday, 2012
11:31:19 AM
Device Status :: Device is in Freeze State/Power OFF State


Viscope Recording and Playback Software V 5.0
ViScope
New
Open
Refresh
Save
Discard
Caliper
Zoom
Zoom Out
Player
Print
Report
Search
Freezing Signal Acquired
Saving Level :: 26%
29 March,Thursday, 2012
11:31:53 AM
Device Status :: Device Freeze Stage
11:31 AM
3/29/2012

Note:

- **Player will not work in transferred signals.**
- **For simultaneous signals acquisition/waveforms transfer the user has to click 'New' button.**

5. The waveform(s) once transferred to PC will be displayed in the PC screen can be saved or discarded.
6. For saving the transferred waveforms, click 'Save'.
7. Select position of Auscultation and Enter Patient ID if desired.
8. Select "Save".



The File name is restricted to a maximum of 25 characters.

7.11 Discard Button

"Discard" Button is used to discard the obtained signal/Transferred signal and to proceed with a new auscultation.

7.12 Caliper Button

The "Caliper" button is used for making time duration measurements of acquired/saved/Transferred heart sound signals in PC. Caliper is mandatory for using "zoom" function.

1. Acquire a heart sound signal (or) open a saved signal.

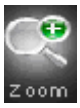
2. Click the Caliper button and note that a pair of vertical lines appears over the heart sound signal displayed.
3. Align each caliper line to position on the signal between which the time duration to be measured.
4. The duration between positions of the caliper lines is displayed in "seconds" as shown below.
5. Approximate "Heart rate" will be displayed.

Disclaimer!
"In order to obtain correct heart rate, user must select adjacent cycles such as systole to next systole, or diastole to next diastole. Software converts the related time between beats to heart rate; it does not select the cycle time"

7.13 Thumb Views

At the bottom of the screen there are thumb nail views of all the files that were recently used.

1. The user can browse the already opened signals through Thumb views.
2. Click on the respective thumb nail to open the respective file.

7.14 "Zoom" Button 

The zoom button is used to magnify the displayed waveform along the horizontal direction. Used for closer observation of the heart sound patterns. When using the Calipers, it is mandatory to use "zoom" function in order to get correct timings.

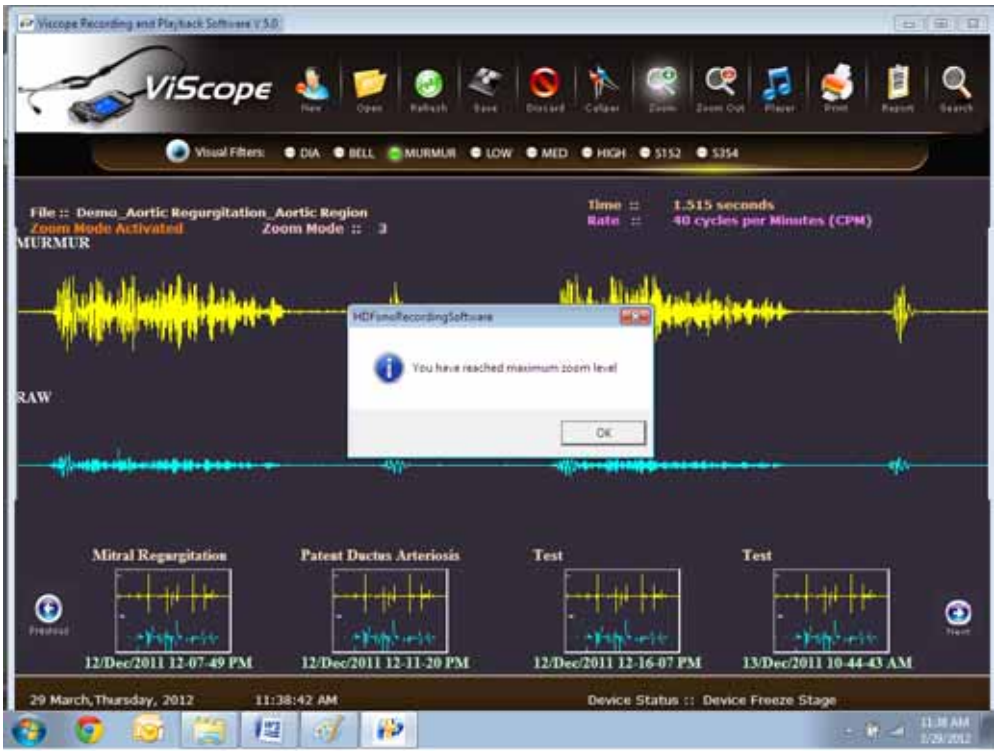
1. **Acquire a heart sound signal (or) open a saved signal (or) open the Transferred signal.**
2. **Click "Caliper", and select the region to be zoomed.**

3. **Click "Zoom" button. The message "Zoom mode activated" is displayed on the screen.**
4. **The region selected between the calipers is zoomed.**

Display after Zoom in

Repeat the previous step for progressive "Zoom in"

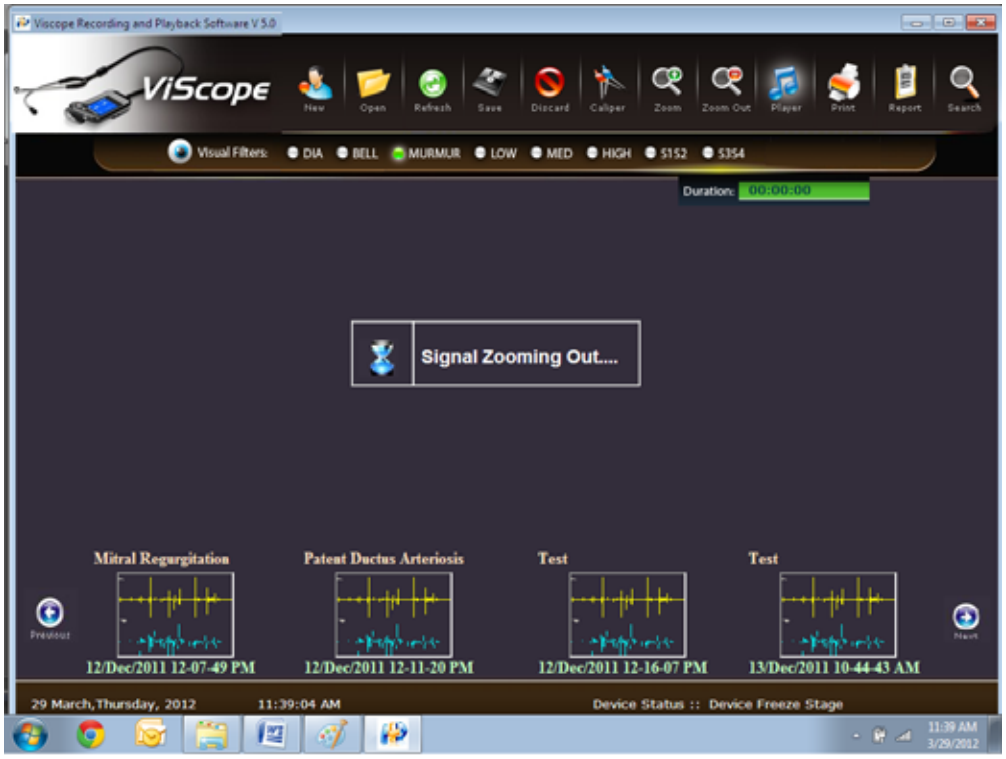
The Zoom Level is indicated on the screen and is restricted to a maximum of 2 levels.



7.15 “Zoom out” Button

The original heart sound signal is displayed after clicking Zoom out.

Display after Zoom out



7.16 “Player” Button

Player button is used to play the signal.

1. **The saved waveform of 10 seconds signal can be played/paused/Stopped.**

2. Recorded Waveforms can be played by selecting the appropriate visual and audio filter; and by clicking on the play icon in the player option.
3. Lung mode audio can also be heard by selecting lung mode.

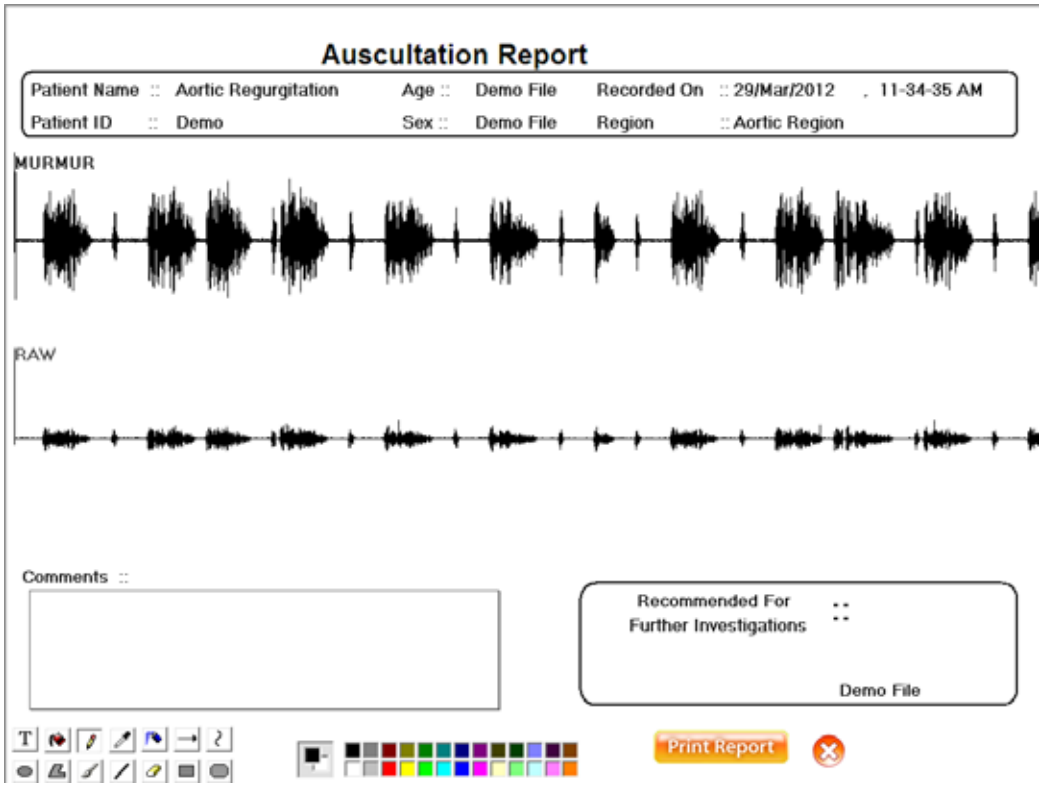
The Player will not work for the transferred waveforms

7.17 "Print" Button

Print button is used to obtain a printable report format of the heart sound signal on display.

1. Acquire a heart sound signal (or) open a saved signal (or) open Transferred signal.
2. Click "Print "
3. The report screen as shown below is displayed.
4. If the report of a saved signal is viewed, the file name will appear automatically in the "Name" field.
5. Click "Print Report" to complete printing.

6. **The system default printer is selected for printing.**
7. **The paint tools are included in the report for annotation.**

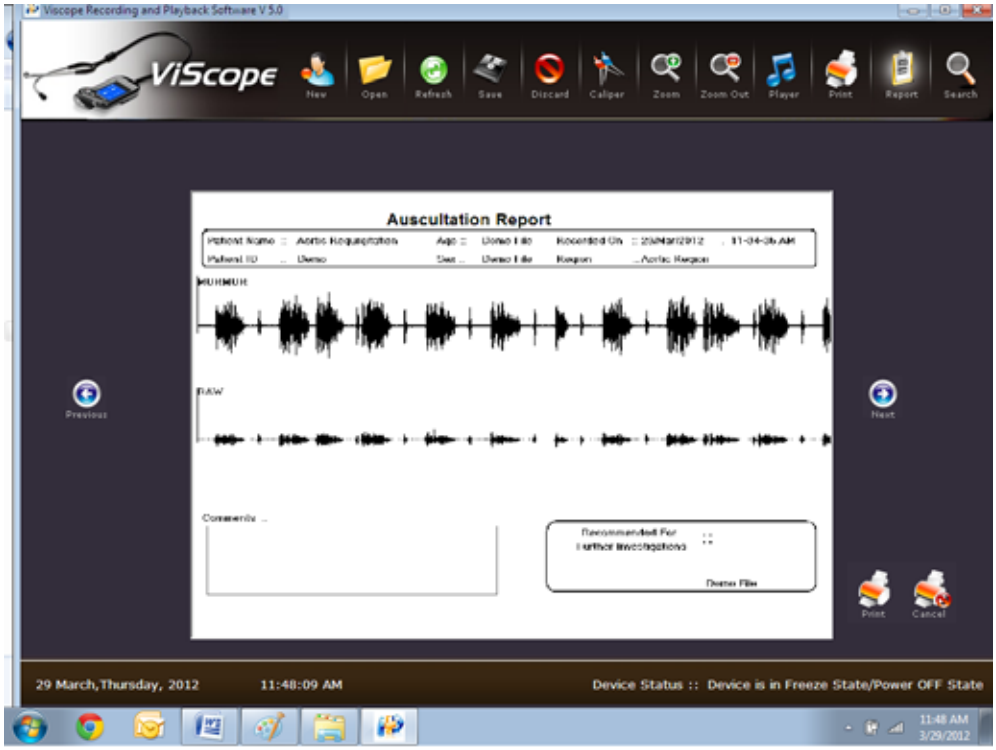


Note:

1. **Using Paint tools the user annotates the signals as desired.**
2. **The paint tools can also be used to annotate for transferred signals.**
3. **After printing, the reports will be automatically saved in the default folder. C:\Program files\ ViScope Recording and Playback Software V5.0\Reports backup or user defined destination while installation.**

7.18 “Report” Button

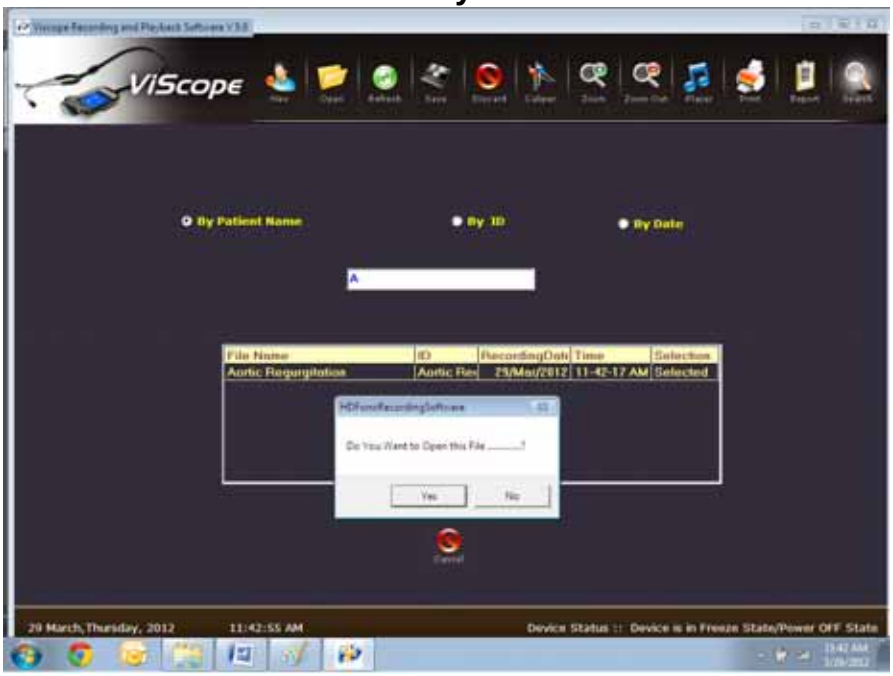
Clicking Report button opens a window to access previously saved reports. The left and right arrows are used for scrolling the already saved reports.



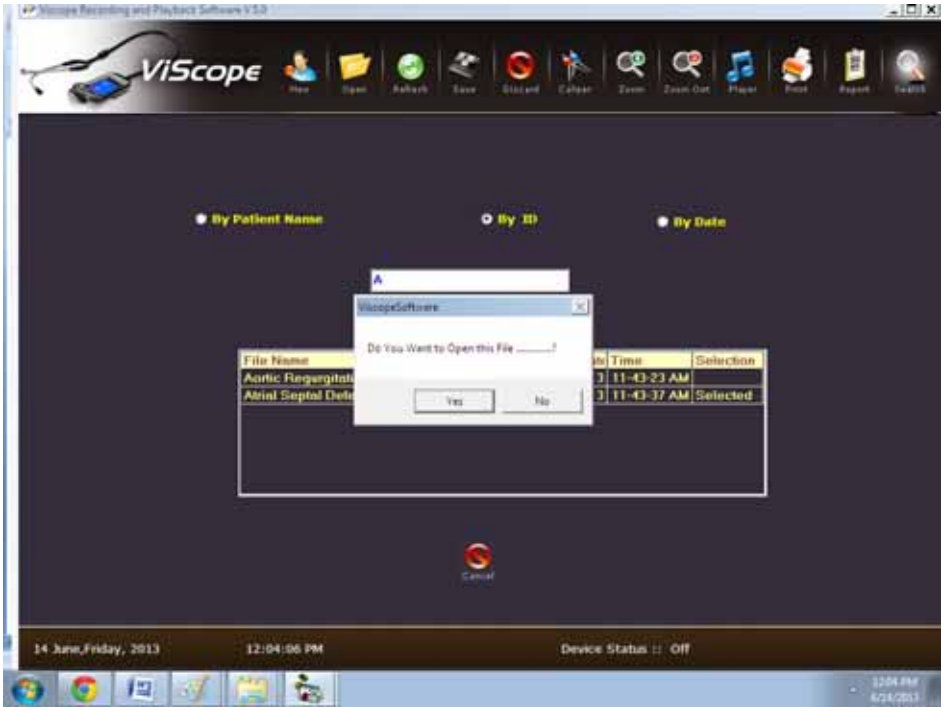
7.19 “Search” Button

By clicking Search button, the user can search the files by Name, ID, and Date. The user has to enter the details in the specified box and has to press Enter

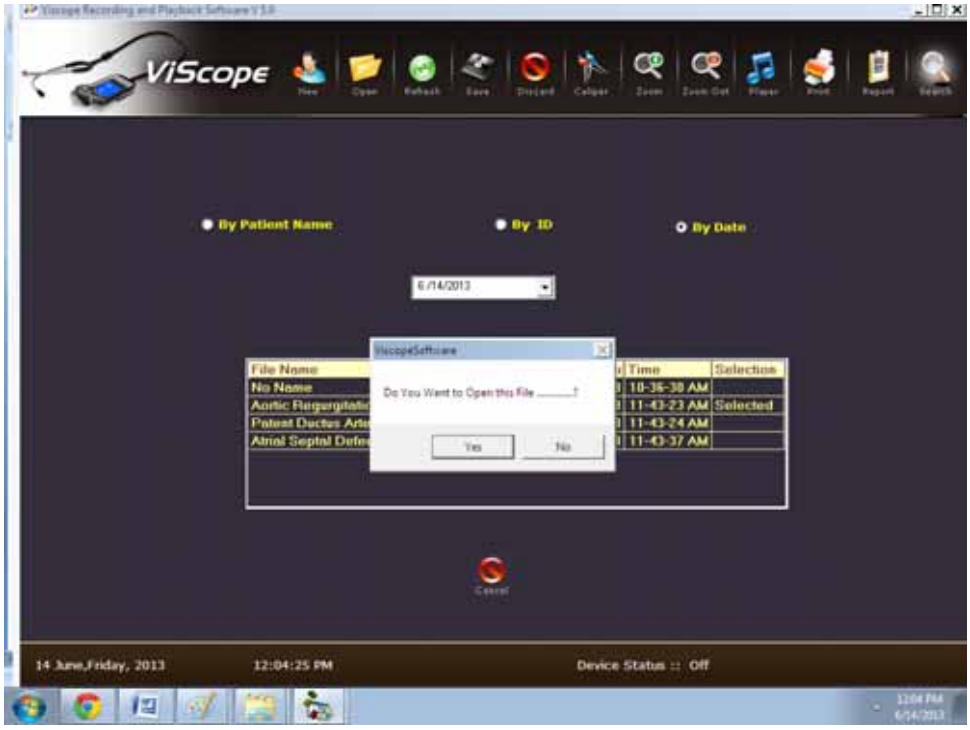
Search by Name



Search by ID



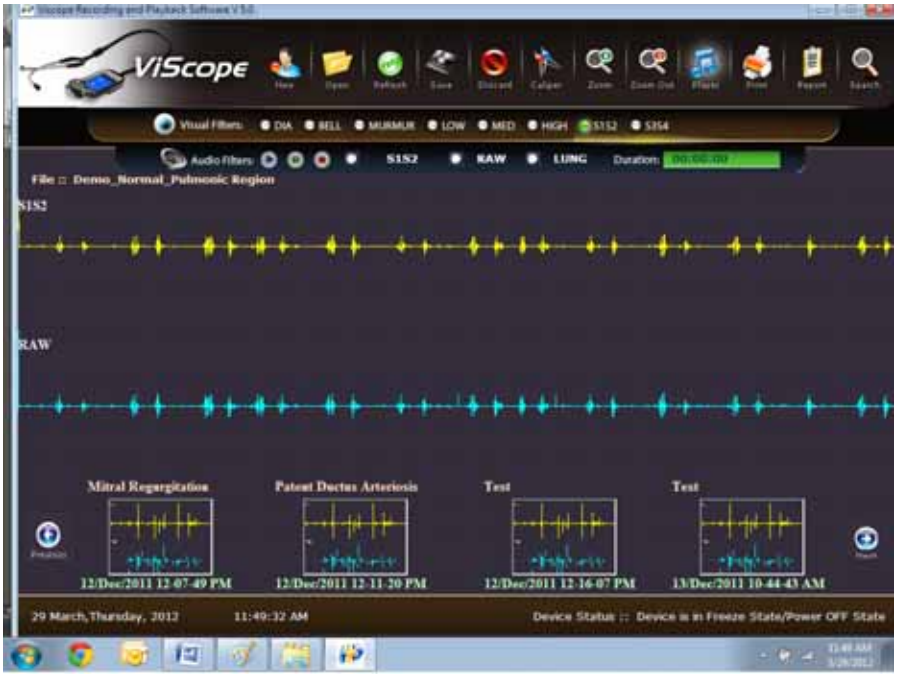
Search by Date



7.20 Filters

The visual filter options Dia, Bell, Murmur, Low, Med, High, S1S2, S3S4 can be selected for seeing selected mode sounds & simultaneously hear whereas, the audio filters option helps only to hear the selected audio mode sounds.

The player can be used for hearing the selected mode sounds



8 Uninstalling VISCOPE Recording and Playback Software V5.0

Note:
It is recommended to take a back up of the complete 'saved files' as well as 'saved reports' to a separate location / save it as back up in a CD or any storage device before selecting uninstall option.

- **Select ViScope Recording and Playback Software V5.0 from the list of programs (Start-Programs- ViScope Recording and Playback Software V5.0) and click on "Uninstall ViScope Recording And Playback Software V5.0"**

- **Alternatively, go to Control Panel and open the "Add/Remove programs list. Select the ViScope Recording and Playback Software V5.0 program and click on "Remove".**

9 Common Messages and Rectification

Message	Possible Causes	Solution
" Device Not Connected"	- The Device is Not Connected properly (or) - PC would not have recognized the device	- Check whether the device is connected to the PC properly. Check both ends of the USB Cable connectors. - Check whether the USB – Port driver software is installed properly. If not Re-install it - Follow the Instructions referred in Section-7.5
" Device in Freeze State [or] Device is in Power off State, Please Release Freeze Button"	- The new button is clicked without releasing the previous freeze state - The Device is NOT Powered ON.	- Press Freeze Button on Device once to Release the freeze state. Power ON the device, - Plug the device to the PC and Start the VISCOPE Recording and Playback Software V5.0 Software.
" Select Auscultation region"	The auscultation region has to be selected.	Select an auscultation region or enter a user selected region.
" You have reached maximum zoom level"	Maximum limit in zoom has been achieved	Close the Message and return to previous display Screen.
"Activate Caliper"	When the user tries to click zoom without initiating caliper.	Press Caliper to select the region to be zoomed
"Enter the number only"	Patients Age should be in numeric	Enter a numeric value
"Report screen is loading, Please wait"	When the user clicks once again before the screen loads.	Please wait till the screen loading is complete
"VISCOPE software already in use"	When the user clicks VISCOPE Recording and Playback	Maximize the minimized window panel from the

	Software V5.0 shortcut icon to open software that is already in use.	desktop.
" Please check the Printer connection"	Printer is not connected properly with the PC	Check the printer connection.
"Only audio in Lung sound mode"	While replaying the signal by selecting Lung mode in the player option only audio will be heard	NA
"Do you want to open this file"	While opening an already saved file this message comes.	By clicking Yes to this the desired file opens else by selecting NO the dialog box closes and no file is opened
"Select Mode"	When any of the modes of the audio filters are selected this message occurs	By clicking OK & by selecting the audio mode for playing the sound
A patient name cannot contain any of the following characters "/ \?|*& <>:	While saving a file using the special characters are not allowed	Avoid using special characters while saving a file